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25 AUGUST 1986

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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HONG KONG

BRIEFS

RADAR NETWORK PLANNED--A network of radar stations will be set up at strategic locations to cover marine traffic lanes as part of the \$215-million Vessel Traffic Management System in Victoria Harbour. The Finance Committee will be asked this afternoon to approve the commitment of public funds and the various financial implications for the implementation of the project. A government spokesman said the VTMS, utilising computers and very high frequency communication equipment, will be able to monitor and control vessel movements continuously to improve safety and the flow of traffic, which has quadrupled in the past 20 years at certain areas. He said that last year, an average of 2,229 ocean-going vessels entered and left the port each month. This figure will increase by about four percent every year. River trade craft and international ferry traffic totalled more than 13,600 movements a month in 1985. The size and speed of these vessels have also increased substantially. The decision to install the VTMS came as a result of the report made by the Canadian Commercial Corporation in late 1984 and the evaluation of the proposals from potential equipment suppliers. The spokesman said the project is supported by the shipping industry and accepts the implications of recovering costs through increases in port and lighter dues and passenger embarkation fees. Barring unforeseen circumstances, the system should go into operation in mid-1989. Another item in the agenda includes new commitments of \$5.8 million to meet the cost of furnishing and equipping a proposed jewellery industry training centre and an electronic data processing training centre for the Vocational Training Council. [Text] [Hong Kong HONGKONG STANDARD in English 9 Jul 86 p 3] /13046

CSO: 5550/0149

PEOPLE'S REPUBLIC OF CHINA

HONG KONG MEETING CALLS PRC TELECOM PLANS HAPHAZARD

Hong Kong SOUTH CHINA MORNING POST in English 7 Jul 86 Supplement p 1

[Text]

AD HOC solutions to the expansion of telecommunications in China by provincial administrations are leading to a lack of co-ordination in the development of its infrastructure.

This was the conclusion arrived at after a discussion on China at the Pacific Telecommunications Council at the Shangri-La Hotel.

In a debate on "Infrastructure Development: The China Connection," the senior general manager of Hongkong Telephone Co, Greg Crew highlighted some of the problems suppliers face in China.

He said while the central Ministry of Post and Telecommunications sets overall policy and standards, "actual implementation and local planning is left to the provincial bureaux and certain regional and city administrations.

"The level of planning at the local level is not as strong as at the national level. One sees ad hoc solutions to emerging requirements."

He said local bodies take a pragmatic attitude in assessing new systems, based largely on which systems are considered to offer the best value at any one time.

Also, they often use old fashioned techniques and have poor records of their installations, he said.

Another speaker, Charles Haller, president of Asia/Pacific for ITT Corp

Hongkong, which has a joint venture manufacturing company in Shanghai, endorsed this view.

He said: "There is no central organisation controlling outlying areas and so at the local level they are going for whatever equipment meets their needs."

He said while central government decides policy, it is up to local units to implement it and see who is going to carry it out.

He said for this reason it is important for overseas companies to be on the spot to offer technical assistance.

Mr Rod Olsen, executive director (Far East Pacific region) of Cable and Wireless plc, agreed with Mr Crew and Mr Haller that while Cocom regulations, which govern the export of potentially defence-sensitive equipment to China, have been relaxed, they can still prove a time-wasting stumbling block.

Mr Crew said: "Cocom can be a source of embarrassment between Chinese buyers and overseas companies and a further relaxation is desirable."

China presently has 0.3 telephones per 100 people in rural areas and 1.6 phones per 100 in urban areas.

Mr Crew said by 1990 China hopes to have 10 phones per 100 people in urban areas and as many as 20 phones per 100 people in the large business centres.

/13046  
CSO: 5550/0150

PHILIPPINES

TOTAL PHILIPPINE CONTROL OF MEDIA URGED

Constitutional Commission Proposal

HK091500 Quezon City BUSINESS DAY in English 9 Jul 86 p 2

[By reporter Geselle J. Militante]

[Text] Three commissioners of the Constitutional Commission are proposing that the ownership and management of media and communication establishments be limited to Filipino citizens and wholly Filipino-owned corporations.

IN their Resolution No 215, Commissioners Wilfrido Villacorta, Vicente Foz and Lino Brocka, also proposed that the government should limit the number of media and communication establishments that can be owned by one individual or company and prohibit cross-ownership of media in a single market.

Employees of these corporations and associations moreover should enjoy the right to be part-owners by allowing them to buy company stocks as well as to participate in management, the commissioners proposed.

In their explanatory note, the three commissioners pointed out that "mass media or mass communications, if widely used, could be an instrument of national integration, a great tool for the education of our people, a promoter of our values and traditions and a vital link for democratic participation..."

The role of mass media and communication, however, is being threatened by the domination by transnational enterprises of advertising in the country, they said. The commissioners pointed out that unless the lines of communication are controlled by Filipinos, there is a danger that the Filipino audience will not only be further swamped by foreign products, but by foreign ideas as well.

Resolution No 215 calls for the "democratization" of media and communication ownership.

Several steps were suggested, aside from ensuring 100 percent Filipino ownership of the media and communication firms.

These steps include limiting the number of such establishments that can be owned by one individual and corporation, and prohibiting cross-ownership.

The latter means that a company or individual who owns, for instance, a newspaper in Metro Manila would not be allowed to own a radio or television station in the same area. "If that newspaper desires to own a radio or television station, then it should be in another market area like Tuguegarao or Davao. This could mean a dispersal of media away from over-concentration in a single area like Metro Manila," the commissioners said.

They added that the participation of journalists-employees in the ownership and management of their respective newspapers is a right recognized in most democratic societies.

In a survey conducted by the Belgium-based International Federation of Journalists among newspapers the world over, 11 countries were reported as having some form of direct journalists' participation in the management of their newspapers.

"Participation of journalists in the running of their newspapers, together with part-ownership of the newspaper, greatly boosts editorial morale and productivity. One of the most prestigious and biggest newspapers in the world is the French LE MONDE which is owned entirely by its employees," the commissioners said.

#### Businessmen Want Domestic Control

HK030725 Quezon City BUSINESS DAY in English 2 Jul 86 p 11

[By Giselle J. Militante]

[Text] A group of Filipino businessmen is pushing for the return of the telecommunications industry to Filipino hands by limiting foreign equity participation in public utilities to only 25 percent, instead of the present 40 percent.

Hilario G. Davide Jr, Constitutional Commission (ConCom) member, has filed Resolution No 46 at the ConCom seeking to institutionalize this equity rule.

Davide's resolution calls for constitutional provisions which will impose a 75 percent local and 25 percent foreign capitalization rule as well as prohibit foreign investors from sitting in the governing body of any public utility.

Santiago Morales, chairman of the Philippine Chamber of Commerce and Industry's (PCCI) subcommittee on telecommunications, filed a position paper supporting Davide's resolution.

This position paper, a copy of which was furnished BUSINESS DAY said that 100 percent owned Filipino firms--such as the Radio Communication Philippines, Inc (RCPI) and the Philippine Telegraph & Telephone Corp (PT&T)--believe that telecommunication facilities are highly important to national security and interest and must be weaned away from foreign control.

"We are not against foreign investments; in fact, we welcome them. We are, however, against foreign domination by foreign transnationals of our telecommunication facilities," the paper pointed out.

Davide's resolution, according to the paper, will not be detrimental to the government's effort to attract foreign capital.

Public utilities are highly profitable enterprises and under Filipino management would generate more profits, the paper said. "As a result of this, foreign investors will still be attracted to invest even if they are not allowed to participate in management. Most of these investors are actually businessmen or enterprises whose goal is to maximize their returns on their investment," it pointed out.

The position paper indicated Morales' sentiments about alien directors, governors or trustees managing, operating, administering or controlling public utilities.

The 1973 Constitution, the paper said, has "emasculated" earlier laws on Filipinization.

It cited the case of international records carriers. The three major international record carriers--Philippine Global Communications, Eastern Telecommunications Philippines, Inc, and Globe Mackay Cable & Radio Corp--are all owned 40 percent by foreign multinational companies.

All three also have management contracts with foreign companies such as RCA for Philippine Global Communications, Cable & Wireless PLC for Eastern Telecommunications Philippines, Inc and ITT for Globe Mackay Cable & Radio Corp. Up to the present, the general managers of these telecommunication carriers are foreigners.

Such "unfortunate" situation the paper said, has contributed to the country's failure to make it as "the hub of international communications in the region." The paper explained that this distinction instead went "to a territory which is the seat of power of a giant multinational which through its part ownership and management of a Filipino common carrier appears to have allowed the country to lose its role as regional hub. This further translates to unquantifiable losses in foreign currency earnings for the country."

Another "adverse" result mentioned was the Filipinos' lack of control over international cable facilities, a situation which the paper described as "a serious threat to national security."

The paper further pointed out that international record carriers direct telecommunications traffic from the Philippines through foreign transit centers of their choice "even if there are other transit centers offering Philippine carriers better rates." Again, this reduces the country's foreign exchange earnings, the paper said.

The paper said Filipino interests are best served by Filipinos through Filipino representation in international conferences.



At present, the paper said, "in international conferences, the Philippines is, more often than not, represented by foreign executives of foreign managed carriers. This is not only causing embarrassment for the country but it is highly possible that the loyalty of these foreigners is not to the Philippines or to the Philippine carriers they represent but rather to their respective countries and to the multinational companies they are working for and paying their salaries."

/9274

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PHILIPPINES

BRIEFS

MINISTER HITS 'INTERNATIONAL INFORMATION ORDER'--The Ministry of Information does not trust the so-called new international information order which was announced by the Third World. This was proclaimed by Information Minister Teodoro Locsin in a luncheon given by him to 30 ASEAN journalists. According to Locsin, developmental journalism is what he refers to as envelopmental journalism, for the money it uses comes from the government. [Text] [Laoag City Nation Broadcasting Corporation Station DWRI in Ilocano 0400 GMT 28 Jun 86] /9604

CSO: 5500/4331

CANADA

# EXTRA CAPACITY OF TELESAT CANADA'S DISCUSSED

Ottawa THE CITIZEN in English 8 Jul 86 p B3

[Article by Andy Ogle]

[Text]

A "bird" in space is worth any number of satellites on the ground these days.

And that has put Telesat Canada, which has two telecommunications satellites parked in "storage orbits," in an enviable position among commercial satellite operators.

The firm, which operates Canada's six-satellite telecommunications network, was criticized for sending the satellites up on board the shuttle in late 1984 and early 1985, well before they were needed. One, which had cost \$67 million, was even for sale at the time.

But with the U.S. space program now grounded and with the recent failure of the European Space Agency's *Ariane* rocket, Telesat's gamble looks pretty smart.

"We are in pretty good shape and much more relaxed than some of the companies which have satellites expiring in the next year or so," says Telesat president Eldon Thompson.

Telesat would have been in the same bind had it not sent up Anik-D2 two years before it was needed. It will replace the aging Anik-B satellite, which is almost out of fuel and expected to fail by next April.

"In hindsight, launching that thing in storage orbit was a wonderful idea," Thompson said.

"At the time, we didn't expect the shuttle was going to blow up. And if we had not (launched the satellite), we would probably be in a position right now where we could not launch D2."

The result, Thompson says, would have been a loss of communications

service for companies renting channels unless Telesat could have found an American satellite with some Canadian coverage where it could rent channels.

The 1984 decision to launch D2 and Anik-C1 was motivated by the shuttle's relatively cheap \$10-million launch price — a price that was to double after three years — and an innovative idea by Telesat engineer Bruce Burlton.

Communications satellites are usually placed in a geostationary orbit about 36,000 kilometres above the equator. In that position, a satellite orbiting at the same speed as the Earth's rotation would always remain over the Americas, with its antennae pointed at Canada.

But its jets must be fired occasionally to keep it on station, and its "shelf life" is limited by the amount of fuel expended. Most have a maximum life of about 10 years.

Burlton came up with a way to put Telesat's two satellites into "biased" orbits, where natural forces gradually bring them on station without the expenditure of any fuel.

"That idea didn't exist at the time we were first considering whether we should launch D2 and C1," Thompson says.

Anik-C1, which Telesat first tried to

sell, will stay in its storage orbit until 1988 when, says Thompson, it will be well-used by traffic from failing channels on other satellites and by growth in demand.

Conceived in 1977, the satellite was a victim of over-estimation of Canadian needs and interests in space-age communications by the time it was ready for launch in 1984.

Telesat hoped to get some of its capital back to invest in a newer design when it put C1 up for sale.

"It didn't work out that way but we're going to use it anyway," says Thompson. "From our point of view that situation worked out quite well."

The glut of commercial satellite space that existed a year ago has tightened up considerably, and Telesat may be able to sell some of its spare capacity on a short-term basis.

While not wanting to be seen to be gloating over a situation that arose initially because of the *Challenger* disaster last January, Thompson can't help but be pleased with his company's foresight in putting its satellites into orbit early.

"All those people who were critical of the over-capacity have suddenly stopped talking," he says.

/9274

CSO: 5520/94

CANADA

## RELAXATION OF REGULATIONS BUREAU AIM AT CRTC

Toronto THE GLOBE AND MAIL in English 8 Jul 86 pp B1, B2

[Article by Edward Greenspon]

[Text]

All afternoon last March 17, an increasingly frustrated CRTC chairman "tried and tried and tried" to get some detailed answers from Paul Desmarais, the powerful chairman of Power Corp. of Canada and confidante of Prime Ministers.

Mr. Desmarais was seeking approval from the Canadian Radio-Television and Telecommunications Commission to buy one of the country's most profitable television stations.

Like almost everybody else, he seemed to take for granted that the prize was his for the asking. Not only was Mr. Desmarais enormously influential, but the chairman of the regulatory panel was a former employee who had refused that morning to disqualify himself.

André Bureau proved that day, however, that he is nobody's pussycat. He proceeded to grill Mr. Desmarais about what public benefits would flow from Power's ownership of the station.

"I've never read anything written in such a vague manner," he snapped about a commitment made by his former boss.

Ultimately, Mr. Bureau astounded his critics — he had, incidentally, been fired as vice-president of La Presse newspaper by Mr. Desmarais in 1972 — when he announced the commission turned down Power's application. "I was disappointed," he now says, "that a group like that was not better prepared to come to us and propose something that made sense."

Decisions like the Power one have earned Mr. Bureau, 50, a growing reputation as a tough-minded and independent watchdog of the nation's airwaves. Yet he remains a controversial figure for his efforts to tilt Canadian broadcast regulation away from its interventionist tradition.

Historical CRTC concerns with matters such as concentration of ownership, cable rates and Canadian content have taken a back seat to the chairman's preoccupation with the financial health of the broadcast system.

"I think it's a joke that the CRTC is still considered a cultural agency," said Brian Anthony, national director of the Canadian Conference of the Arts.

In his Hull office after a long day of public hearings, an otherwise charming and loquacious Mr. Bureau makes plain his irritation with those who believe he has cast cultural issues adrift in the Ottawa River below. He concedes that financial matters have dominated his tenure, but says he had no choice because of the circumstances — like the pay-television mess — he inherited from a predecessor unschooled in financial realities.

"You can't imagine that you can expect from the licencees dramatic or fantastic contributions to the Canadian broadcasting system if they are not financially strong enough to support that."

Mr. Bureau believes broadcasting's financial house is nearly back in order now. And with Canada's three major television networks scheduled to appear before him for the first time in the next few months, he says he's ready to finally bare his cultural teeth.

CBC, CTV and Global already are on formal notice that the chairman expects them to come up with better Canadian programs than all "these cooking shows."

Measuring Canadian content by the clock is one of those traditions that doesn't make much sense to Mr. Bureau. For broadcasting to prosper in this country, programs must be good enough to attract viewers both at home and abroad, he says.

In the next month or so, he intends to offer broadcasters a package that will include a lighter regulatory load and incentives to pool their programming resources in exchange for an agreement to put more of their money into bigger budget Canadian productions.

The relaxation of regulations has been a central theme of Mr. Bureau's time at the commission. He has removed quotas on the amount of radio advertising allowed, saying those who abuse their freedom will be more severely punished by listeners turning the dial.

He has also given cable companies the right to adjust rates, subject to certain constraints, without getting prior CRTC approval. And he has stated that the CRTC is not interested in regulating non-programming services offered on cable.

Again, Mr. Bureau says he is demanding something in return — the cable industry must carry more programming services than non-programming ones and, for the first time, carry a majority of Canadian channels.

Still, the cable operators are elated. Michael Hind-Smith, president of the Canadian Cable Television Association, says the battle to reduce its regulatory load has been "the single central fact of our existence" since the industry was placed under CRTC authority in 1968.

With Mr. Bureau, private broadcasters feel they can finally talk turkey with one of their own. Unlike his predecessors who came to the job from public service or academia, the current chairman's working life has been spent in law and business.

Starting out as a coffee-house folk singer, Mr. Bureau took over his father's law practice in Trois-Rivières, Que., and then went on to become an executive in newspapers and broadcasting. In 1982, he took command of Canadian Satellite Communications Inc., a pioneer in satellite delivery of signals.

Given his unique experience ranging from print to satellites (with a dash of entertainment), Mr. Bureau was a natural candidate to take over the CRTC in a period of rapid technological change. In a three-hour job interview with Prime Minister Pierre Trudeau and Communications Minister Francis Fox in late 1983, he laid out the rough blueprint that he has since followed at the commission.

The politicians had one major concern before announcing Mr. Bureau's appointment — that his business past would come back to haunt them all. But he assured

them he would avoid any conflicts of interest.

Not everybody was so easily pacified. Critics, especially in the cultural industries, cried that the fox had been put in charge of the chicken coop.

Mr. Bureau has been embroiled in more than his fair share of controversy since. In 1984, he was accused of participating in decisions that favored his old company, Cancom.

Just last month, he was the subject of a Royal Canadian Mounted Police investigation into improper business conduct in his dealings with the CRTC while he was with Cancom. The matter came to public attention after documents filed at the CRTC were leaked to New Democratic Party member of Parliament Lynn McDonald.

Mr. Bureau — who was cleared — admits to being disturbed at the thought that secret enemies are working to discredit him. "There were people who were inclined to believe that it would not be acceptable that somebody from the industry would go and regulate the industry in future. I think this is the beginning of the thing."

Whoever these enemies may be, they have not managed to hamper Mr. Bureau's effectiveness. Although he is just one of nine full-time and 10 part-time commissioners — many far more interventionist minded — he "has clearly had a more seminal influence on the practices and attitudes of the commission than any chairman since the first one," according to Mr. Hind-Smith.

Close observers credit his influence to his firm grip over the administrative apparatus of the commission, his cultivation of allies among full-time commissioners and clever use of his agenda powers. "He's a skilled tactician," said Bill Roberts, senior vice-president of television for the Canadian Association of Broadcasters and a former CRTC commissioner under Mr. Bureau.

He has also put the CRTC's decision-making into high gear. Under former chairman John Meisel's collegial style, decisions would be delayed for months in order to develop a consensus. Mr. Bureau opts for a simple majority vote and tells dissenters they are free to write minority opinions.

A more profound change for the

commission is its looser attitude toward the consolidation of media ownership. Traditional taboos against too many broadcast outlets being held in too few hands or the same companies being involved in both cable and broadcast have gone the way of the Morse telegraph key.

"Nowadays, if you don't have these strong entities, you won't survive," he said.

At the same time, he has tried to balance the equation by licensing more independent television stations and speciality pay-TV services.

In all his moves, Mr. Bureau sees himself entering into a form of compact with broadcasters and cable companies, in which he makes life easier for them and they, in turn, give more back to the broadcasting system.

Although he's widely perceived to be pro-business, he says the businesses he regulates will not be allowed to slither out of their commitments.

"We will not stay idle while they are laughing at their own promises," he said, citing tough decisions like the recent renewal of all-news radio station CKO's licence for 18 months instead of the customary five years.

The Hill family of Regina learned last year just how ornery Mr. Bureau can get when he is crossed. The Hills appealed a CRTC decision to the federal Cabinet, complaining that the licensing of a new television station in Regina would bankrupt their CTV affiliate. The Cabinet ordered a new hearing.

Mr. Bureau didn't miss a beat in quickly releasing previously confidential financial data that showed the Hills were mining gold at their station, infuriating the secretive family. Following the second hearing, the commission reiterated its original decision.

"Broadcasters should know they won't play fast games with us," Mr. Bureau said.

Like the Power decision, the episode demonstrated that first and foremost Mr. Bureau is his own man, following his own vision of how Canadian broadcasting should evolve.

"He's only unpredictable," said the CAB's Mr. Roberts, "in the sense that people think they've got his number and he surprises them."

CANADA

## TELEPHONE SYSTEM DEVELOPED FOR ELEVATOR EMERGENCIES

Toronto THE GLOBE AND MAIL in English 1 Jul 86 p B4

[Article by Barbara Aarsteinsen]

[Text]

Capitalizing on recent advances in digital technology, a group of Canadian companies has developed a telephone system that provides quicker rescue in elevator emergencies.

The unit, which can beat the costs of conventional intercom systems by up to 50 per cent, was designed by Mitel Corp. of Kanata, Ont., in collaboration with Granville Technologies Inc. and Midcom Communications Ltd. Inc., both of Toronto. The first installation was made recently in the Toronto-Dominion Centre, a three-tower office complex in downtown Toronto.

"Most complexes of this nature do not take advantage of the capabilities of modern telecommunications systems due to the lack of technical awareness in this field," said Ivor Kaye, president of Granville Technologies, a design consultancy. "The digital system is quicker and more efficient — and it is more economic."

Typically, a person trapped in a disabled elevator pushes an alarm button, which sets off a ringing bell and alerts the building's security officers to the problem. If and when the security personnel react — a response often requires some additional screaming and shouting, as anyone ever stuck between floors can testify — communication takes place via an intercom.

When the emergency button is pushed in the digital system, an alarm is raised and the elevator occupants are connected, within three seconds, with security as well as the outside world — either the building's engineering department or an elevator repair company is automatically notified.

If the security post is unmanned for some reason or the call goes unanswered for more than 30 seconds, the connection is relayed to a back-up position. If that post is unattended, the call is bounced to yet another position — ensuring a response somewhere along the line. The system can also be programmed to instantly alert emergency services such as the fire department.

Many buildings are introducing a policy of restricted access after normal working hours, requiring tenants to use encoded or magnetic cards to get in and out — thereby cutting down on security staffing requirements. When there's an elevator problem, it can thus be difficult to raise help, Mr. Kaye said. With the digital system, which allows calls to be forwarded from one position to another and provides a link to people outside the building, this difficulty can be avoided.

Mr. Kaye estimated the digital elevator system can cut the cost of a conventional intercom, which runs upward of \$100,000, by about 25 per cent. If the system can be incorporated into a building's over-all communications network, the savings can be up to 50 per cent, he said.

/9274

CSO: 5520/92

CANADA

BRIEFS

PAPERBACK-SIZE SATELLITE DISH--A satellite receiver that is about the size of a paperback book has been developed by Nexus Engineering Corp. of Burnaby, B. C. The SR-5 can be tuned to most NTSC satellite transponder frequencies. It is also compatible with current scrambling systems. [Text] [Toronto THE GLOBE AND MAIL in English 12 Jul 86 p B18] /9274

CSO: 5520/92



GERMAN DEMOCRATIC REPUBLIC

NEW HIGH FREQUENCY TRANSMITTERS IN OPERATION

AU271703 East Berlin DER MORGEN in German 21 Jul 86 p 2

[Article by Dr Hans Juergen Hammer, deputy minister of posts and telecommunications: "Radio Above 100 Megahertz: GDR Develops Hitherto Unexploited Frequency Range: Reception Conditions Improve"]

[Text] Like other European countries, the GDR is now building very high frequency radio transmitters operating between 100 and 104 MHz. Since November 1985, GDR radio programs have been transmitted over new frequencies in this range from Inselsberg, Brocken, Dequede in Osterburg Kreis, Schwerin, Sonneberg, and Karl-Marx-Stadt.

To date a frequency spectrum of 87.5 to 100 MHz was customary. Fifty-six very high frequency transmitters are, as before, enabling GDR citizens to receive within this range the programs of the Voice of the GDR, Berlin Radio, Radio GDR I, and Radio GDR II. Good quality monophonic reception of these main national programs is ensured throughout the entire GDR territory. On the basis of technical-physical propagation conditions, stereophonic transmissions are now reaching some 75 percent of the citizens. Since the traditionally used frequency range from 87.5 to 100 MHz does not permit the operation of more transmitters, no further expansion of stereophonic reception can be achieved this way. Other countries possessing transmitter networks for monophonic reception that cover the entire area are also in a similar position.

Hence this problem can only be solved by further developing the very high frequency transmitter system in a new frequency range.

A prerequisite for this was an agreement between the European and African states united in Radio Region I, in order to jointly use the frequency range between 100 and 108 MHz, released by the international telecommunications associations for very high frequency radio reception in 1979.

The GDR Ministry of Posts and Telecommunications and the radio and television technical central office of the German postal service have worked out scientific-technical principles which were made known internationally and were accepted by the International Telecommunications Association as a basis for planning. The GDR position was accepted at the international conference in Geneva. In the agreement which becomes effective on 1 July 1987, 82 very high frequency transmitters in the 87.5 - 100 MHz range and 77 very high frequency transmitters in the 100 - 108 MHz range have been envisaged for the GDR.

Already in the past few years staff workers of the radio service of the German postal service had created the first few prerequisites for all this by commissioning the very high frequency transmitters in the 100 to 104 MHz range ahead of schedule.

As a result of these measures, reception conditions have improved this March, particularly in the GDR's southern and western Bezirke, for the "Youth Radio DT 64" program. At the same time, the transmission times of the regional programs of Rostock, Schwerin, and Weimar were considerably extended. While most effectively using the available material and financial funds, the fifth very high frequency transmitter chain for the "Youth Radio DT 64" program will be developed to ensure that its transmissions can be monophonically received throughout the entire Republic.

/12858

CSO: 5500/3012

YUGOSLAVIA

BRIEFS

AUTOMATIC INTERNATIONAL TELEPHONE EXCHANGE--On 21 July 1986 the first direct-dial telephone call was made from Zagreb to Tokyo. For the first time all 600,000 telephone subscribers in Croatia can direct dial calls to non-European countries rather than go through the international exchange in Belgrade. "Very soon" the service will be available throughout Yugoslavia. "The connection has been established by means of the Yugoslavia-1 and Yugoslavia-2 satellite earth stations in the village of Prilike near Ivanjice in western Serbia and the new intercontinental optical cable intended for links with America. The new automatic intercontinental telephone exchange in Zagreb has a capacity of 2,600 connecting points with 840 international lines, which makes it possible to increase the number of simultaneous international calls between Yugoslavia and the world 200- to 300-fold." In addition, the cost of calls going outside Europe will decline by 50 percent. They will cost 834 dinars per minute. A call to the United States previously cost 1,637 dinars per minute. [Summary] [Zagreb VJESNIK in Serbo-Croatian 22 Jul 86 p 1] /6091

CSO: 5500/3013

BERMUDA

# PROVISIONS OF NEW TELECOMMUNICATIONS LAW DISCUSSED

Hamilton THE ROYAL GAZETTE in English 21 Jun 86 p 4

[Text]

The "cornerstone" of proposed changes in Government's telecommunications legislation was laid yesterday with the tabling of a bill in the House of Assembly.

Senator Charles Coillis, Minister of Legislative Affairs, said the Telecommunications Act 1986 is designed to bring under one umbrella the various acts and organisations that already regulate communications in Bermuda.

In particular, the Bill would set up a five- to nine-man Telecommunications Commission, appointed by the Telecommunications Minister. This would be the major steering body for the control of local telecommunications.

The Bermuda Telephone Company Limited and Cable and Wireless would have to turn to it to obtain permission for any rate changes. Price control for these currently rests with the Cable and Wireless Services Review Body and the Price Control Commission.

The Commission would also investigate applications for broadcasting licences and check out complaints against broadcasting and communications companies that offer their services for a fee. The Telecommunications Minister would make the final decision in both cases.

The Bill also tries to encompass technological developments that have occurred in the last 13 years.

It would give owners of pay television or radio subscription services the right to sue those who possess, sell, import or manufacture devices which descramble signals to which the station owners have proprietary rights.

A Court could award them \$400 in damages, or \$1,000 if it found the infringement had been made for business purposes.

However, they would have to prove that the person they were suing knew at the time that they were infringing on the broadcaster's rights.

Satellite networks used by local pay-TV stations for programming are also covered by the Bill. Satellite dish owners who possess descramblers which they use to decode such signals could therefore be sued by pay-TV stations.

Senator Collis said the Bill would also try to bring order to the local radio spectrum by increasing Government's control over radio wave bands.

Under it, the Telecommunications Minister would decide what frequencies would be used by all local radio transmitters except the military ones at the US Naval Air Station.

The Bill would also make it unlawful for a station not operating on its assigned frequency to interfere with the signal of another.

In addition, those who used a public telecommunication system to pirate computer data or interfere with a computer programme could be fined as much as \$5,000 and sent to

prison for up to two years, if they were found guilty on indictment.

In most other respects the bill updates the 1973 Telecommunications Act. For example, to account for inflation it increases fines for practices such as broadcasting without a licence.

In the process of legislative consolidation, it also brings under its aegis the International Telecommunication Convention — to which Bermuda is already bound — and other legislation which makes it illegal to make obscene telephone calls.

In line with the Bermuda Constitution, the Bill affirms the inviolability of communications and makes wiretaps illegal, except where they are performed in an attempt to uncover someone who is making obscene phone calls.

However, it still allows the Governor to prevent or intercept a transmission if he believes it is in the public interest to do so.

/9317

CSO: 5440/092

COURT RULES ON OWNERSHIP OF BERMUDA BROADCASTING COMPANY

Hamilton THE ROYAL GAZETTE in English 4 Jul 86 p 1

[Excerpts]

Businessman Mr. Fernance Perry yesterday won control of the Bermuda Broadcasting Company in the latest round of the \$1.35 million takeover battle with the Edmund Gibbons group.

The Appeal Court ruled the Gibbons takeover of the BBC in May last year was invalid and ordered the shares to be transferred to Mr. Perry and his holding company, Mayfair.

The appeal overturned a decision made in the Supreme Court by Puisne Judge the Hon. Mr. Justice Collett. Two of the three judges awarded costs to Mr. Perry.

But Mr. Perry will have to wait up to three weeks before he knows if the Gibbons group is willing to give up the fight to control the BBC, which runs the ZBM and ZFB radio and television stations.

Also having to bide his time will be Mr. Kenny DeFontes, owner of the rival VSB radio station, who be-

came a BBC director after buying some of the disputed shares, worth more than \$750,000.

Mr. DeFontes is barred under an injunction issued by the Chief Justice from using his shares in any way.

Mr. Perry will certainly want to buy out Mr. DeFontes if Gibbons decides not to appeal or loses in front of the Privy Council.

An appeal to the Privy Council — costing in the region of \$70,000 or more for the loser — would be a major investment in money and time in a case which has already dragged on for nearly a year.

The Privy Council would be unlikely to deliver a judgment before the start of next year and could take more than 12 months.

The appeal could be important for British, as well as Bermuda, case law, since most of the arguments put forward in Bermuda have centred on English company law precedents, many dating back to last century.

/9317  
CSO: 5540/092

BRAZIL

BRIEFS

SOVIET SIGNALS AFFECT HAM RADIO BANDS--Brazilian installations tracking clandestine transmissions are trying to identify a strange and strong intermittent signal that has been interfering with ham radio bands throughout the country. According to Dentel [National Telecommunications Department] equipment, the signal comes from the Asian region of the Soviet Union near the border with Afghanistan. Dentel has already asked for the help of U.S. Government experts to determine the origin of the interference, which is believed to be caused by very strong radar signals. The problem has not yet been solved. [From the "Radar" page] [Text] [Sao Paulo VEJA in Portuguese 23 Jul 86 p 43 PY] /6091

CSO: 5500/2072

COLOMBIA

DEVELOPED NATIONS' 'OCCUPATION' OF GEOSTATIONARY ORBIT SCORED

Medellin EL COLOMBIANO in Spanish 17 Jun 86 p 2-A

[Text] Cartagena. Colombia today denounced the developed nations' "de facto occupation" of geostationary orbit, through "the absence of clear ground rules."

Foreign minister Augusto Ramirez Ocampo charged that equal rights to space "are being ignored because of the overwhelming monopolistic, technical and scientific powers of the more advanced nations."

Ramirez Ocampo, while opening in Cartagena the first Latin American conference on space cooperation, called for the creation of an advanced studies center in order to begin to develop specific responses to this issue.

Cooperation

"We can not forget that international cooperation is an obligation everyone shares; governments, peoples, organizations, scientists, technicians, politicians, etc.," noted the foreign minister.

The minister recalled that the 1967 "Space Constitution" stated that "space is the common patrimony of all humanity, and its exploration and development should be carried out for the good of all peoples, no matter what their level of economic and scientific progress."

"The developing nations are claiming that it is essential to share the natural resources of space, based on international law which guarantees them a distribution of the benefits, and which is not based on their technological or economic capabilities," he added.

Occupation

Speaking about the geostationary orbit that passes over the equatorial nations, the foreign minister said that a unique, "non-egotistical" system is needed to defend the nations which "are not space powers, from the de facto



occupation of a saturable strategic resource, which in reality is not within our reach for a number of reasons, making equality an illusion and changing freedom into a monopoly."

According to the minister of foreign affairs, "the absence of clear ground rules that would permit a parallel development of legal regulations in step with technological development is creating sensitive situations in the areas of sovereignty, responsibility, and the use of space resources."

After insisting that the course of the space race can only be properly channeled by means of cooperation without borders, he proposed the creation of an advanced studies center to deal with space issues.

He felt that such a center is needed, since "our developing countries have few comparative advantages, but without any doubt one of them is that we can follow in the footsteps of the more advanced nations' experience. That allows us to take 'technological shortcuts' that will give us more rapid access to knowledge."

7679

CSO: 5500/2061

PERU

BRIEFS

TV ACCORD WITH SPAIN--Peru and Spain have signed an agreement through which television viewers will learn about the cultural, political and economic reality of these two countries. The agreement was signed by Television Peruana and Spanish television. The agreement will allow an intense bilateral cultural exchange. [Lima Television Peruana in Spanish 0100 GMT 21 Jun 86 PY] /6662

CSO: 5500/2067

ST CHRISTOPHER AND NEVIS

TELEPHONE, MICROWAVE, RADIO ENHANCEMENTS PLANNED

Basseterre THE LABOUR SPOKESMAN in English 21 Jun 86 p 3

[Text]

On Monday 16th June, 1986 SKANTEL brought the new Charlestown Digital Telephone Exchange into service. The exchange is housed in a new building at Ramsbury Estate in Nevis.

This exchange along with the extension of the Bird Rock Exchange which is at present under installation will provide an additional 550 subscriber lines in Nevis and a similar number in St. Kitts.

Completion of these two projects along with external cable works at present in progress will enable SKANTEL to begin to tackle the back log of persons awaiting telephone connections

in Basseterre and Nevis between now and the completion of the entire new telephone system scheduled for late next year.

The new telephone exchange provided by Northern Telecom employs state of the art digital technology and is equipped for a total of 1300 lines but can be expanded by simple additions to keep pace with the expected growth over the foreseeable future.

Work is progressing rapidly to increase the capacities of the St. Kitts/Nevis radio system and of the overseas microwave connection which will vastly improve the service between the islands and to and

from the outside world.

Furthermore once this work is completed SKANTEL will extend its limited international dialling facilities to Nevis and extend the coverage of the system in St. Kitts.

General Manager Terry Stone said "Taken together completion of these two major projects

completes the first stage of SKANTEL's development plans for telephones in St. Kitts and Nevis. That the entire project from ground breaking to providing telephone service has been completed in less than 6 months demonstrates that SKANTEL is on course to provide the state with a telephone system which when completed will be second to none".

/9317

CSO: 5540/093

ST LUCIA

CABLE AND WIRELESS 'MONOPOLY' ON CABLE TV CRITICIZES

Castries CRUSADER in English 21 Jun 86 p 9

[Article by Glenn Long: "Cable and Wireless Has a Monopoly"]

[Text]

**I will not willingly be gulled".**

**Ben Johnson  
The Alchemist**

On 29th May 1986, Mr. Ian Boatman, manager of Cable and Wireless set about justifying the reasons for granting Cable & Wireless a cable TV licence. "Cable and Wireless does not want a monopoly, and any body else is free to compete." What Mr. Boatman did not tell the audience, was that C & W already had a monopoly on Cable TV. With a mixture of arrogance and cynicism Mr. Boatman went on to say that the only reason why C & W was interested in cable TV was because of public demand. Mr. Boatman went on to say that since C & W were essentially transmission engineers, they would be able to provide a much better signal than what was currently available. The cost of the C & W service will be \$50.00 monthly; twice the cost of service presently available in St. Lucia. It is for all the reasons offered by Mr. Boatman, that C & W should never be granted a cable television license.

In 1955 Sir Arthur Lewis wrote a book called Theory of Economic Growth. Sir Arthur makes the observation, that progress often comes not through the efforts of those who are in authority, but through the efforts of

those who are in opposition. Cable TV is an excellent example of what Sir Arthur is talking about. According to Sir Arthur "it takes effort to acquire knowledge and to apply it may require both extra resources and also extra willingness to bear risks". There are people in St. Lucia who have made the effort to acquire the knowledge to run an efficient Cable TV network. The risks are not as great as we are led to believe. They do not however, have the resources necessary to make the system work.

What is involved in a Cable TV network? The TV signal is picked up from space by an antennae commonly called a dish. The signal is then transmitted to a series of receivers inside the plant. From the receivers the signal enters a multiplexer. There is one cable which leaves the multiplexer, and it is from this cable that consumers receive their signal.

What about the market for Cable TV? Some people go through the great expense of buying personal antennas to pick up the signal from space. C & W say there is public demand for the system. Several St. Lucians have been trying to set up separate T.V. networks. So there is obviously some demand for the proper transmission of T.V. signals. The question remains on, how does

one enter the market? The equipment is expensive. If it is a cable TV network, then there must be some place to run the cables. Traditionally wealthy people in poor countries invest in markets they understand. Such as land, trade, money-lending and urban housing. They hardly ever invest in public utilities, commercial agriculture, or manufacturing unless they can be guaranteed exceptional profits. A person can only 'see' what they understand. Without the required knowledge local investors are not aware that there is money to be made in Cable TV. There is no risk where cable TV is concerned. It is almost a perfect market. Sir Arthur believes that the only reason why foreign companies choose to invest in the poor countries, is because they are aware of the short-comings of the local investors. Sir Arthur says, "they are attracted only because they believe that they can make much larger profits than they would if they invested their money at home".

What are the obstacles to locals entering the Cable TV business. The cable must be buried underground on its way to the consumer. This is expensive. Locals are already short of capital. Or the cable can be run along existing utility poles. Such as electricity poles. Cable and Wireless were granted the use of electricity pole to run telephone wires. Why can't the same concessions be granted to a local Cable TV network. The TV cable does not in any way affect the lines already on the poles.

Cable and Wireless have been in St. Lucia for a very long time. They have not been able to transmit a telephone signal, free of statics at all times. It is virtually impossible to call Marigot when it is raining heavily. It is virtually impossible to get in touch with the out-districts by telephone. Why must we now believe that they can transmit a decent TV signal, when TV signals are more difficult to transmit than telephone signals?

This is the Third World. We must learn to make use of technology after it has been developed in the industrialized countries. We are not monkeys living in trees. We may be poor but we can match brain for brain anything produced in the metropolitan countries. And we have a Nobel prize to prove it (against all odds). If Mr. Boatman says he does not want a monopoly why is it no one else must use the electricity poles? I want an answer, Because of the rapid improvement and the ease of transmission there is nothing that Cable and Wireless can set up in St. Lucia that St. Lucians cannot do. All we want is a chance in our own country to prove what we can do.

The alternative to Cable TV is to transmit in the manner Channel 4 does at the moment. However, it is next to impossible to collect subscriptions if the signal can be picked up with a simple antenna. With the Cable network, C & W will find it much easier to police their system. Why must the more expensive alternative be left for the local operators?

It is not right in a small country to export foreign exchange in briefcases. It cannot be right to export it through TV cables. If we are to develop we must expand our economy. In economic terms we say growth must take place in the economy. The word growth is a much abused statistic. Sir Arthur says "It is possible that output may be growing, and yet that the mass of people may be becoming poorer. We must examine the relationship between growth and the distribution of output". We cannot say that C & W will increase the growth in the economy if the profits from the Cable TV network are to be exported.

Cable and Wireless already has a monopoly on telephone, to allow it to control cable TV as well is to make a monstrosity of it, and a mockery of growth and development.

TRINIDAD AND TOBAGO

BRIEFS

OPPOSITION TV PLANS--San Fernando--The attitude of a National Alliance for Reconstruction (NAR) Government towards the establishment of a second television station in Trinidad and Tobago would be a very simple one. "I am personally of the view that an NAR Government would grant licence for a second television station," said Opposition Leader Basdeo Panday, one of NAR's Deputy Political Leaders. He said he felt Trinidad and Tobago Television should not enjoy a monopoly. Not only would an NAR Government grant a licence for another television station, but would also give favourable consideration towards granting licences for the establishment of as many radio stations as possible. "If that is what the people want, they would have it" would be the stand for the NAR Government, he added. "We believe in freedom of the news media, both economic and written," said Mr Panday. It is more than eleven years now that the South Trinidad Chamber of Industry and Commerce is trying to obtain a licence to establish a television station in San Fernando. [Text] [Port-of-Spain TRINIDAD GUARDIAN in English 3 Jul 86 p 7] /9274

CSO: 5540/088

INDIA

# FIRST DIGITAL ELECTRONIC EXCHANGE OPENED IN DELHI

New Delhi PATRIOT in English 1 Jul 86 p 3

[Text]

Delhi Telephones on Monday commissioned its first 10,000 lines digital electronic exchange at Rajouri Garden with the code No. 543.

The new exchange is being thrown open for incoming shifts for subscribers from Tuesday. This inauguration comes close on the heels of the recent expansion of the Nehru Place Exchange.

The current waiting list in the Rajouri Garden areas is 27,000 and the new exchange will help in wiping out the list for the OYT, non-OYT, special categories and a sizable portion of the non-OYT general category, Delhi Telephones general manager B M Khanna said.

According to Mr Khanna, during the current monsoon period the work of providing new connections would be slow, but it would pick up after September, and by December 1986 about

8,000 new connections would be provided.

The exchange's inauguration has taken place three months ahead of schedule and the entire project costs Rs 15 crore, while its import cost Rs 8 crore. It has been supplied by M/s CIT, Alcatel of France.

Subscribers will be offered several facilities like detailed billing for STD long-distance calls, which can be given to subscriber without much effort, abbreviated dialling, call waiting, call transfer, automatic wake-up call service and the like.

According to Mr Khanna, another 43,000 lines have been programmed for the year and of these 35,000 will be digital type and by December 1986, a 10,000 lines capacity exchange will be cut into service at Shakti Nagar. Another exchange of 15,000 lines will be opened at Laxmi Nagar by March 1987, he said.

/13046

CSO: 5550/0147



INDIA

#### BRIEFS

**TELEGRAPH SERVICE PLAN**--The long-neglected telegraph service would receive top priority in the next 12 months so that 90 per cent of telegrams to the farthest destinations would be delivered within 12 hours, the Union communications minister, Mr. Ram Nivas Mirdha, said here today. Mr. Mirdha said Rs. 80 crores has been provided for the development of the telegraph service which still remained the basic communication network for the common man. He admitted that enough attention was not given to this essential service in the past. Inaugurating a seminar on the past, present and future of telegraph service," organised by the department of telecommunications, Andhra Pradesh circle, the minister said, "We are so obsessed with the voice service (phones) that we have been neglecting this important service (telegraph), much to the detriment of the nation." The seminar was organised to mark the completion of one century of telegraph service in the twin cities of Hyderabad and Secunderabad. UNI adds: Mr. D. K. Sangal, secretary in the Union department of telecommunications, in his key note address, said 50 earth stations in the north-eastern region would be linked up on an experimental basis to the low cost satellite communication service to pass on telegraphic messages. If it was found successful it would be extended to the 600,000 villages which have no telegraphic lines at present. [Text] [Bombay THE TIMES OF INDIA in English 22 Jun 86 p 7] /13104

**INDIA-UAE CABLE**--A wideband submarine telephone cable linking Bombay and Fujairah in the United Arab Emirates (UAE), which is one of the major projects of Videsh Sanchar Nigam Limited during the seventh Plan, is expected to be ready for service by August-end, an official press release said in Delhi on Wednesday, reports PTI. It said the letter of intent for surveying the route, laying and commissioning the submarine cable link including associated terminal equipment had been awarded to messrs STC PLO of Britain by the Indo-UAE managing committee at Abu Dhabi on 28 June after high-level delegation led by the Additional Secretary in the Ministry of Communications, Mr Shree Shanker Sharan, had detained discussions with the UAE telecom authorities. The link would be owned in equal proportion

by the Videsh Sanchar Nigam Limited, India, and the Emirates Telecommunications Corporation Limited, UAE. The total cost of the contract is \$58 million. The survey of the marine route, soon after the monsoon, would determine the exact route and the length which is presently estimated at 1964 kms. The cable link would provide 1380 voice grade channels which could support telephone, telex, voice band data and facsimile. [Text]  
[New Delhi PATRIOT in English 4 Jul 86 p 9] /9317

LONG DISTANCE IMPROVEMENTS--The Department of Telecommunications has taken a number of steps to improve the long distance trunk telephone services in the country, reports PTI. A spokesman of the Communication Ministry said in New Delhi on Thursday that stable and reliable transmission media were being provided for long distance trunk circuits, over the satellite, microwave, coaxial and UHF (radio systems) linking the national, main and difficult terrain routes. Standby trunk circuits to keep the trunk service working round the clock, he said, had been provided on the national and main routes. A close watch was kept over the performance of the trunk manual exchanges working at the capitals, through a close surveillance and monitoring cell. He said additional and new trunk circuits had been provided wherever justified to cope with the trunk traffic to minimise delays on trunk calls. Additional trunk boards had also been provided, wherever justified. The spokesman said for improving the staff position, short duty and reserved trained pool staff telephone operators would be appointed. Demand trunk routes would be provided wherever necessary. Additional demand trunk manual exchanges such as in Bombay (Prabhadevi) would be opened. He said it was planned to provide push button diallers, and a 'Postex' (paperless operation of trunk exchange) at Trivandrum on experimental basis as a first step towards computerisation of trunk manual exchanges. [Text]  
[New Delhi PATRIOT in English 4 Jul 86 p 5] /9317

PTI SATELLITE SERVICE--Bombay, June 26--The Press Trust of India's project for the broadcast of news and photographs via satellite simultaneously to subscribers everywhere in the country is among the 'giant strides' the organisation is taking in enriching its services, its chairman, Mr Ramnath Goenka, told the 38th annual general meeting of the company here today. An experiment with prototype equipment developed for the project by the Space Applications Centre, Ahmedabad, and PTI's own R and D wing, is being planned next month. This will be followed by installation of about 25 direct reception sets around the country to receive PTI's various news services and India's first wirephoto service, initially on an experimental basis but going into commercial operation without delay. Mr Goenka, who is chairman of the Indian Express group of newspapers, was unanimously reelected PTI Chairman.--PTI [Text] [Madras THE HINDU in English 27 Jun 86 p 7]  
/9317

CSO: 5550/0151

PAKISTAN

## NEW RAILWAYS TELECOMMUNICATIONS SYSTEM OPERATING

Karachi DAWN in English 12 Jul 86 p 12

[Text]

LAHORE, July 11: Syed Yusuf Raza Gilani, Federal Minister for Railways, will inaugurate on July 13 the first phase of the new telecommunication system on Rawalpindi-Lahore line backed by microwave.

The Pakistan Railway launched a programme in 1978-79 to improve its old, obsolete and inadequate telecommunication network operating on overhead wires leased from Telephone and Telegraph Department.

This programme envisaged installation of modern systems of main and important branch lines from Karachi to Rawalpindi via Khanewal, Faisalabad and Lahore.

With the completion of the project the train system will become more efficient and reliable with the result that controller shall be able to decide about the crossing of various trains more accurately thus resulting in less detention of trains particularly the goods trains.

After the completion of this project due to availability of direct dialling facilities to all the important operating points the monitoring and control of wayside stations, washing lines, sheds, will be more effective resulting in better performance.

Mr Mehfooz Azim, Chief Engineer, Railway Telecommunication, explaining the details of the project said that every high frequency radio-set in the locomotives would enable the controller and station-master to keep constant

watch in case of any trouble faced by him.

The tape-logging system in the control office of all the divisions would keep record of all conversation with the controller by the locomotive driver and station-master at times of emergency it would be a great help from finding out the causes of accidents and mishaps.

About 17 electronic telephone exchanges at important stations for direct dialling facilities between the stations and the headquarters would be available.

After the operation of microwave system the handling capacity of railway will be improved and earning increased.

The new system will provide more safety to passengers and improve the working of the trains. The station-master and locomotive drivers would be having direct link through V.H.F. radio sets and in case of any mishap or engine failure, he could inform the controller or station-master for arranging another locomotive to replace the defective engine.

The new communication system will improve the efficiency of the Pakistan Railway and after its completion the department will install another computerised management information system which would be helpful for the reservation of seats, preparing pay-rolls and tabulation of personnel data.—  
PPI

/9274

CSO: 5500/4739

PAKISTAN

BRIEFS

TELEVISION SURVEY INITIATED--Multan, 28 Jun--A countrywide survey has been initiated to upgrade and broaden television network in the country. This was stated here on Saturday by the Federal Minister for Information and Broadcasting, Chaudhry Shujaat Hussain. [Text] [Karachi DAWN in English 29 Jun 86 p 1] /9274

CSO: 5500/4739

INTER-AFRICAN AFFAIRS

PARTICIPANTS FROM SEVEN COUNTRIES CONCLUDE CAPTAC SESSION

AB132049 Dakar PANA in French 1535 GMT 12 Jul 86

/Text/ Yaounde, 12 Jul--The working sessions of the seminar on setting up the National Plans of Improvement and Maintenance (PNAM) in Central Africa ended on Friday in Yaounde. The participants appealed to the CAPTAC /Conference of Ministers of Central African Posts and Telecommunications Administrations/ to promote studies on propagation and statistics connected with problems often caused by lightning in the subregion. The 57 participants from seven African countries noted a partial and slow execution of development, maintenance, and operational program in the subregion and carried out a financial evaluation of the execution of the maintenance plan. They also noted with satisfaction the willingness of foreign financing institutions to favorably examine the PNAM projects.

Mr Francois Wanmi, Cameroon's director of telecommunications who presided over the closing ceremony, stressed the need to integrate into the study of equipment acquisition plans, recurrent charges for their use and maintenance, while taking into account the rapid progress of technologies in the sector of telecommunications. He also said that telecommunications is a field in which the subregion is lagging behind especially as a result of the multiple problems caused by links between the member-countries. He finally asked developing countries to join their efforts in order to guarantee the maintenance of communications equipment and to avoid the double economic and financial risk posed by the rapid replacement of certain installations. The seminar, it is recalled, was aimed at promoting the drawing of national plans of maintenance in the member-countries in the perspective of providing a viable telecommunications services.

/12228

CSO: 5500/93

INTER-AFRICAN AFFAIRS

BRIEFS

AFRICA COMMO CONFERENCES--Nairobi, 10 July--Minister for Transport and Communications Arthur Magugu has announced that Kenya will host the Africa Telecom-86 conference and exhibition which will be held from 16 to 23 September and the African broadcasting conference which will be held from 22 September to 10 October. Both events will take place at the Kenyatta International Conference Center in Nairobi. The minister stated that the broadcasting conference will revise and review the 1963 Geneva plan on VHF-UHF broadcasting for Africa and the neighboring countries. He said so far 34 countries from Africa and the Persian Gulf have confirmed they will participate. /Summary/ /Nairobi KNA in English 1035 GMT 10 Jul 86 EA/ 12228

CSO: 5500/93

BENIN

BRIEFS

RADIO PARAKOU RESTORED--The minister of information and communication /Houdou Ali/ visited Kalale and Nikki during the 2nd day of his tour of the Borgou Province. Throughout his tour the minister has been touching upon the same subjects like the radio receiver tax, telephones, and movies. Here is Labby Ogouchiga on line from Parakou. /Begin Ogouchiga recording/ Concerning Radio Parakou, it is going to resume its transmission in the next few days because replacements for the faulty parts which caused its breakdown arrived yesterday in Parakou. But we must wait until September when it will attain its full programming level like when it started transmission 3 years ago. All these details were given by Comrade (Bert Lamatta), head of section and confirmed by Comrade Houdou Ali. /Excerpts/ /Cotonou Domestic Service in French 1930 GMT 9 Jul 86 AB/ 12228

CSO: 5500/93

CONGO

## JAPANESE EQUIPMENT GRANT ARRIVES

Brazzaville MWETI in French 27 May 86 p 2

[Article by Moutadiia: "Tele-Congo Accepts a Consignment of Equipment"]

[Text] A large consignment of equipment (a gift of the Japanese government to the Congolese government) was delivered yesterday to the management of the National Television. The ceremony took place in Studio One at Tele-Congo and was attended by the minister of information, posts and telecommunications, Comrade Christian Gilbert Bembet and the charge d'affaires of the Japanese embassy, Mr Yasuaki Nogowa.

The delivery of this equipment is a result of the agreement reached by the two governments on 4 November 1985. This agreement aims to promote cultural cooperation between the two countries through intensification of educational and cultural broadcasting by the Congolese National Television. In light of these provisions, the Japanese government did not remain indifferent to the Congolese government's request, put forward in 1984, for the supplying of television equipment.

Consisting of cameras, magnetoscopes, video-news equipment, microphones, battery chargers, production monitors and video cassettes, this consignment of equipment has an overall value of 40 million yen or about 81,600,000 CFA francs.

According to the charge d'affaires of the Japanese embassy, it will facilitate the diffusion of knowledge about today's world, as well as the cultural and social sensitization of the inhabitants. "We hope this equipment," he continued, "will allow Tele-Congo further to expand and diversify its activities, in order to contribute to the social and cultural development of the country." On his part, Minister Bembet thanked the Japanese government for the step it has taken in favor of the Congolese government. The minister said in substance that this step reflected the good will the Japanese government has always shown toward the Congolese government in promoting television broadcasting. "Now it is up to the users," the minister concluded, "to make good use of this equipment while taking good care for its preservation."

13070/12859  
CSO: 5500/90



GHANA

BRIEFS

JAPANESE TV EQUIPMENT TO GBC--The Japanese Government today formally handed over new broadcast equipment to the GBC [Ghana Broadcasting Corporation] at a ceremony at Broadcasting House in Accra. The ceremony marked the completion of phase 1 of the GBC rehabilitation program which officially started in August 1984. An amount of 146 million cedis was donated by the Japanese Government towards the program. The equipment includes new television transmitting facilities for [words indistinct] which consist of 2 pairs of 10 kw color transmitters in addition to the old 5 kw black-and-white transmitters which is still in use. Other facilities provided include a standby generator to power both the new and old transmitters, four radio stations, and a central air-conditioning unit. In a speech read for him, the secretary for information, Mr Totobi-Quakyi, asked workers of GBC to use the equipment to create a new awareness and consciousness in Ghanaians to build the country, and they should learn to appreciate the need to care for the equipment to make it give longer years of service. Mr Quakyi hoped that by the end of 1987 it will be possible for all parts of the country to have TV reception, both black-and-white and color. He was grateful to the Japanese Government for the various grants made available to the GBC. [Text] [Accra Domestic Service in English 1800 GMT 16 Jul 86 AB] /9274

CSO: 5500/97

GUINEA

AGREEMENT SIGNED WITH PRC NEWS AGENCY

AB152228 Conakry Domestic Service in French 1945 GMT 15 Jul 86

[Text] Cooperation between Guinea and the PRC is making progress. A co-operation agreement was signed today at the Ministry of Information and Culture between the GUINEA PRESS AGENCY and NEW CHINA NEWS AGENCY. On this occasion the Chinese ambassador [Yu Huimin] to our country said:

[Begin Yu recording] The Republic of Guinea and China are Third World countries. Our means of communications in the field of telecommunications and information are still quite weak and quite modest. Nevertheless, we need [words indistinct] to work, and I am sure that this small step will contribute to the work of the NEW CHINA NEWS AGENCY and the GUINEA NEWS AGENCY, and I am convinced that with time the GUINEA NEWS AGENCY will become increasingly important in the field of information and press in (?our) country. [end recording]

In reply to this speech, the principal secretary of the Ministry of Information and Culture, Hamani Diaby, said:

[Begin Daiby recording] The recent reorganization of the GUINEA NEWS AGENCY had two aims: to provide our national press and the international press with authentic and reliable news collected from all over the national territory, in order to intensify, and dynamize the exchange of information between our country and the outside world. As you are aware, the life of such an institution is quite difficult. That is why we hail all friends who have extended their hands to our young agency to help it in its fresh departure. [end recording]

/9274  
CSO: 5500/97

NIGER

TELEPHONE LINK WITH NIGERIA TO BE ESTABLISHED IN 1987

Niamey LE SAHEL in French 17 Jun 86 p 3

[Text] Beginning in April 1987, Katsina in Nigeria and Maradi will be linked by a telephone line, and it will be possible to set up an exchange of television programs. One more achievement to be credited to the Joint Niger-Nigeria Cooperation Commission. Set up in November 1970, the organization was born of the two countries' desire to build an efficient and homogeneous economic area.

Cooperation has thus been institutionalized and structured so as to make it more effective. First there is the High Authority. As the highest level of the organization, it sets the latter's main policy orientations, and comprises the Niger and Nigeria chiefs of state. The Council of Ministers brings the planning ministers of the two countries together once a year to prepare a cooperation program and submit it to the chiefs of state. After the acceptance of this program, a permanent secretariat headquartered in Niamey sees to its implementation.

After 16 years in operation, the Commission already shows a very impressive record, including Nigeria's supplying electric energy to Niger from the Kandji dam.

There is also an air transportation agreement, and another on ground transportation. Thanks to the latter, it has been possible to forward food aid from countries friendly to Niger under favorable conditions.

In the area of technical and cultural cooperation, an agreement was in force from 1982 to 1984. It will be reviewed for 1986, 1987 and 1988.

A number of other projects are under study. In particular, a general development program for making profitable use of the watercourses shared by the two countries. And three agreements relative to a judiciary treaty are to be discussed this very day at Lagos by a meeting of experts.

13070/12859  
CSO: 5500/90

SENEGAL

TV TRANSMITTER TO BE INSTALLED IN ZIGUINCHOR

AB101543 Dakar Domestic Service in French 2000 GMT 9 Jul 86

/Excerpts/ Communications Minister Djibo Ka presided over the National Council meeting on audiovisual equipment for 5 hours today. Present at this important meeting which will henceforth take place twice a year were representatives of the presidency and of the various ministries, governors from all the regions of Senegal, as well as top-ranking officials of press and communications agencies.

This meeting also symbolizes the willingness of the National Audiovisual Council to start off on a sound footing in order to respond to the expectations of the head of state who attaches particular importance to communications.

Among the major ideas discussed is the establishment of a rural service within the television network as it exists within the radio network which has already attained a respectable level. As our dear permanent secretary has said, we have not inherited our radio and rural television from the colonial system. We can therefore be proud that we have tried to pull our country out from underdevelopment.

In his closing address, Minister Djibb Ka paid tribute to all the participants and said:

/Begin Ka recording/ I am convinced that President Abdou Diouf has made the right choice by keeping the National Audiovisual Council active and by giving it specific prospects and also entrusting it with the role of prospector, envigorator, and coordinator of our communications policy and the /word indistinct/ and information.

Concerning the installation of community television receives--they are 20 in number--I would like to confirm the choice of the region of Ziguinchor since the time the Senegalese Government signed a financial cooperation agreement for the installation of a second television transmitter in the city of Ziguinchor.  
/end recording/

/12228

CSO: 5500/93

SOUTH AFRICA

SABC BROADCAST TO CHANGE 1 SEPTEMBER

MB111228 Johannesburg Domestic Service in English 1100 GMT 11 Jul 86

/Text/ The director general of the SABC, Mr Riaan Eksteen, has announced that 1 September a number of radio program services will change because the SABC has achieved greater flexibility in the use of radio and television channels with the leasing of the Intels at satellite from 1 July.

Mr Eksteen said that from 1 September Radio Orion would be broadcast daily from 9:30 pm on the Radio Suid Africa transmitters, while Radio Allegro would be broadcast from the same time on the Radio South Africa transmitters. Radio Five's two existing transmitters at Brixton and Pretoria will be expanded to six, with additional stereo transmitters at Davel on 90.4 mHz, Middleburg on 97 mHz, Kroonstad on 93.4 mHz, and at Welverdiend on 107.3 mHz. In addition Radio Five will broadcast on its existing medium-wave transmitters to the various regions as well as on a short-wave transmitter from 1 September which will be aimed at the northern part of South-West Africa.

Radio Five's high-power medium-wave stereo transmitter near Johannesburg will be used for the transmission of the new program service, Radio Metro, from 1 September. Radio Metro will broadcast mainly in English and programs will be aimed at the urban black population. This service will be broadcast on medium-wave in stereo between 5 o'clock in the morning and midnight. Nine radio services in Nguni and Sotho languages will be combined from midnight until five in an all night service on FM and on Radio Metro medium-wave.

Radio Highveld, Radio Jacaranda, Radio Oranya, Radio Good Hope, Radio Aloga, and Radio Port Natal will make this Transmitters available for simultaneous broadcasting of selected TV4 program. Radio 2000, which will be broadcast on the former Springbok Radio transmitters will be available from 4 pm Monday to Friday, and from 2 pm on Saturday and Sunday for simultaneous broadcasting of TV1, TV2, TV3, and TV4 programs. The transmitters of Radio 2000 will be used for educational channels during the day.

/12228  
CSO: 5500/94

SOUTH AFRICA

BRIEFS

SABC TO DELAY SIMULCASTING--Johannesburg, 27 June, SAPA--For technical reasons, the SABC has decided to postpone for a few weeks the introduction of simulcasting utilizing the Intelsat Transponder. The SABC needs to conduct several test transmissions before the full simulcasting service is offered on all four TV channels, the corporation said in a statement released in Johannesburg. The conclusion that this temporary postponement indicates that any SABC service will be privatized in the near future is laughable. Listeners and viewers will be informed of the new introductions date and details of the test programs by mid-July. [Text] [Johannesburg SAPA in English 1443 GMT 27 Jun 86 MB] /12858

CSO: 5500/92

ZAIRE

BRIEFS

COMMERCIAL RADIO EXPERIMENT--Kinshasa, 8 Jul (AZAP)--The Voice of Zaire/Kinshasa is currently experimenting for 3 months with a new commercial channel which will lead to the creation of a commercial station, it was learned from reliable sources. This new decision was made by the management of the Zairian Radio and Television Office with the aim of turning the office into a profitmaking one. The future commercial station will serve the city of Kinshasa and its surrounding towns. The first tests began in June 1986 and the trial period will last till September. It must be noted that the regional stations of the Voice of Zaire at Kananga and Mbuji-Mayi will soon have commercial stations. /Text/  
/Kinshasa AZAP in French 1815 GMT 8 Jul 86 AB/ 12228

CSO: 5500/93

USSR

## COMMUNICATIONS TODAY, TOMORROW...

Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 86

[Article by G.G. Kudryavtsev, First Deputy USSR Minister of Communications]

[Text] On May 7, workers of all branches of our country's communications industry celebrate their professional holiday. On this day 91 years ago an outstanding Russian scientist A.S. Popov performed the first radio transmission in the world. Now the Soviet Union firmly occupies advanced positions worldwide, as far as the level of development of communications facilities is concerned.

The advent of radio laid ground for the development of a number of areas in science and technology. Space communications are of ever growing importance for the national economy. With the help of satellite systems, dependable telegraph and telephone communications over vast distances became an everyday reality. Via communications satellites, two programs of the Central TV network are broadcasted practically over the entire territory of the country.

### Space and Communications

In many countries of the world, scientists have been long demonstrating heightened interest to the problem of space utilization. This is caused by the fact, that from a satellite, stationed at a sufficiently high altitude (up to 36-40 thousand kilometers), one can transmit various signals (including TV signals) over vast territories, up to one third of the entire Earth surface.

In our country, mastering of satellite communications commenced in 1965 with launching the "Molniya-1" satellite, having an elongated elliptical orbit, that supported the operation of the communication line between Moscow and Vladivostok. Later, based on this ISZ [artificial Earth satellite], the "Orbita" communications system has been developed, that is used for reception of TV programs and for telephone communications.

In 1967, by the 50-th anniversary of the Soviet regime, the first 20 reception stations of satellite communications system "Orbita" were commissioned in the regions of Siberia, Far East, Central Asia and Far North. The first "Orbita" stations led to the increase in the number of TV viewers of Central TV network by 20 million.



Today this system includes about 100 ground stations, that have 12 m diameter antennas and low-noise parametric amplifiers. After geostationary ISZ "Raduga", and later "Gorizont", had appeared in the mid-seventies, the "Orbita" network of stations was converted to operation with these satellites. They orbit in the plane of equator at the height of 36 thousand kilometers and make one complete revolution around Earth in 24 hours, hence for an observer on Earth they seem to hang motionlessly over a certain point on the equator.

The "Orbita" network of stations was built mainly in large cities with the population of tens and hundreds of thousands. Construction of such stations in areas with low population density would not have been economically feasible. For our country, with its eastern and northern regions, having a low population density, the problem of providing TV broadcasting to these regions could be solved faster and in the most economical way by using a distributing satellite system with simple and inexpensive ground reception stations. Such are the "Ekran" and "Moscow" systems.

Exceptionally efficient is the use of space channels for photoelectric transmission of newspaper pages to decentralized printing points. The possibility to read central newspapers the same day has been already provided for inhabitants of many cities and settlements in Siberia, Far East and Central Asia. Tens of newspapers and magazines titles are transmitted via satellite channels, and via "Moscow" stations photocopies of newspapers can be transmitted directly to print shops, which eliminates the need to build costly ground connecting lines.

#### TV Broadcasting via Satellite

The first "Ekran" satellite was launched into a geostationary orbit in 1976. The area, served by the satellite, is over nine million square kilometers (about 40% of the entire USSR territory) and covers regions of Siberia, Far North and part of the Far East. Over 20 million people live there, and 7.5 million did not have previously the possibility to receive TV transmissions.

For the "Ekran" system, the 0.7 GHz frequency band was selected, due to its simplicity and low cost of ground reception facilities. The use of inexpensive transistor input amplifiers, simple multielement antennas of the "wave channel" type and the on-board transmitter, having the maximum allowable capacity, made it possible to attain high quality parameters of the TV channel, while using low-cost reception facilities.

The "Ekran" system is being successfully operated, and its hardware components are widely used in various conditions: in large and small settlements and even in individual geological parties. Today over 4,000 facilities of this system operate in the country, which made it possible to provide TV for regions, that are practically inaccessible to ground facilities for transmitting TV programs. The network of stations keeps expanding.

However, it is unfortunately impossible to use this system in other regions of the country, because the coverage of the territory, located to the West and East of the existing service zone, would have caused exceeding the established international standards. This called for the development of close in its

simplicity and efficiency hardware for transmission of TV programs to regions of the European part, the Urals, Central Asia and Far East.

#### New Generation of Space Communications Systems

In accordance with the specified objective, a new satellite space TV broadcasting system "Moscow" had been developed and was commissioned in 1979. The system operates in a well mastered 4 GHz frequency band, which made it possible in a short space of time to develop and implement the new system's hardware. "Moscow" is a supplement to already operating systems "Orbita" and "Ekran", and it opens possibilities for practically complete coverage of the country by two Central TV programs.

For the development of the "Moscow" system, special basic r.f. channels of a geostationary ISZ of the new "Gorizont" series were used. The transmitting device of a ground station sends a signal in the direction of the ISZ, and the on-board receiver and transmitter of the "Gorizont" satellite transform the signal, received from Earth, amplify it to 40 W and broadcast it to a certain territory on Earth via a narrow-banded antenna.

A receiving "Moscow" station is equipped with a 2.5 m diameter antenna and a low-noise amplifier. A signal, received by the "Moscow" station, arrives at a TV transmitter, whose type and capacity depend on the required service zone, and then the TV program is transmitted to users. Today the number of receiving "Moscow" stations exceeds 1,000.

In addition to TV programs, stations of "Orbita", "Ekran" and "Moscow" networks also receive radio broadcasting programs, and "Orbita" and "Moscow" stations also have the capability to reliably receive images of newspaper pages. Satellite communications systems are used for telephony and for transmission of other types of information. In this case, a receiving ground station is converted to a transceiving one.

Because our country stretches from West to East over 11 time zones, the two Central TV programs are transmitted in ten doublers, so that viewers in every region of the country can watch TV broadcasts at convenient time. To this effect, 10 TV channels at seven ISZ are used.

In order to increase the number of TV programs transmitted, a new multichannel satellite broadcasting system for the 12 GHz frequency band is being developed.

#### International Cooperation

Over the 20 years of existence, satellite communications systems have gained solid grounds all over the world. This is first of all due to the capabilities of satellite systems to organize communications channels between remote and almost inaccessible territories, to the low cost of channels and to the speed, with which a communications channel can be organized.

A new impulse for further development of ISZ and space research can be given by international cooperation. Starting in 1971, the "Intersputnik" international organization has been successfully operating. It is open to all

countries of the world, that strive for peaceful utilization of space for the good of the entire mankind.

Today 15 countries are members of this organization; each country has a ground station, operating as part of the "Intersputnik" system.

A number of European, Asian and African countries, though they are not members, use the organization's services. The "Intersputnik" system does not have its own communications satellite, but rather leases the needed number of repeaters from Soviet geostationary ISZ "Gorizont", located over the Atlantic and Indian oceans. About one half of all TV exchange between the OIRT member-countries is performed via the network of "Intersputnik" ground stations. In addition, a daily exchange of programs with the "Intervideniye" member-countries has been organized and a regular exchange of programs with the "Eurovision" member-countries is performed, as well as with the USA and Japan. "Intersputnik" provides broadcasting of a number of the most important international, political, sport and cultural events, which is a testimonial to the international recognition of the organization.

Another type of cooperation is the joint research and development in the space communications area, performed within the framework of the "Interkosmos" program. As an example, one could cite joint studies of the conditions of radio waves propagation in frequency bands, scheduled for use in prospective satellite communications systems, that are conducted at the international experimental site in the town of Dubna near Moscow.

We have experience in lending individual basic r.f. channels to other countries, which are not members of the international "Interkosmos" organization.

The peaceful utilization of space in the best interest of all interested countries constantly increases, and new opportunities for mutually beneficial cooperation in the development of satellite communications keep opening up.

#### Economic Aspect of Satellite Communications

The economic feasibility of developing satellite communications systems is determined by comparing them to an equivalent ground network, i.e. to such network of ground stations, that performs the same functions, as the satellite system under consideration. The most important feature of satellite communications systems from the economical standpoint is the independence of expenditures from the distance between the points, between which the communications are organized. In contrast to this, the cost of ground communication lines increases in proportion to the length of the line. It follows, that at a certain length of a communication line, which is called the economically feasible length, the expenditures for the satellite and the space lines will be the same. In other words, using satellite communication lines becomes feasible, when the length of a communication line exceeds the economically feasible length.

The economically feasible length depends to a great extent on the level of development of satellite communications technology, on the number of ground

stations in the network and on a number of other factors. This parameter is constantly coming down, and equals now 50 kilometers for the "Ekran" and "Moscow" TV broadcasting systems and one to five thousand kilometers for telephone systems. It can be seen from the above data, that the most profitable is using satellite systems for transmission of TV and other circular information.

The 27th CPSU Congress raised the strategic problem of accelerating the social and economical development of the country. Our industry, as well as the entire national economy, has to make a hard turn towards production intensification and quality and efficiency improvement. The value of communications services in the coming five-year period is scheduled to increase by 26-28 percent. Based on the newest scientific and technological achievements, we shall continue the development and increase the reliability of the country's unified automated network.

Communications workers have come to their professional holiday with good results. In the environment of high exactingness, efficiency and self-criticism, a clear production rhythm is being determined. The four-month plan quotas have been met for all indices. There is every reason to expect successful realization of problems, raised by the party for the industry.

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CSO: 5500/1014

EUROPEAN AFFAIRS

FRG TELECOMMUNICATIONS EXECUTIVE VIEWS U.S.-EUROPEAN COMPETITION

Stuttgart FLUG REVUE in German No 6, Jun 86 p 12

[Interview with Dr Herbert Weber, managing director of ANT Communications Technology; date and place not given]

[Excerpt] [Question] American satellite manufacturers have the advantage of a large domestic market. Mass production means price advantages for exports. What can the German aerospace industry and its European partners do in order to get orders despite this?

[Answer] The advantage of a large domestic market is further enhanced by a considerable military market. Moreover, there is the government subsidy for U.S. satellite manufacturers through NASA, which was resumed about 2 years ago: the Advanced Satellite Program (ACTS) should help U.S. industry to get ready for the next generation of communications satellites. Over \$100 million has been allocated for this project. European industry must continue to face the resulting distorted competition. A long-term program of subsidies similar to the ACTS program is also necessary for European aerospace companies if they still want to maintain and possibly improve their good position in the future. Our large expenditures for research and development, as well as capital investments, will help us to cope with competition on the world market if we continue to be involved in all major European projects.

[Question] The use of space technology will considerably modify the communications landscape during the coming years. Where are the critical points in your development plan?

[Answer] In particular, the increasing use of high-performance fiber optics technology will shift applications of communications satellites to point-to-point communications and mobile services. We are developing systems for satellite signal processing and switching functions. We have started to exploit higher frequencies and are thinking about concepts where groups of satellites are in an orbital position; the so-called clusters are used to enhance the capacity of those systems. The advanced performance characteristics of satellite technology will yield new applications which will in part be connected with new types of services.

[Question] Does ANT want to act as a systems leader in future projects for communications satellites?

[Answer] We think that the management of communications satellite systems belongs to telecommunications companies when these systems are being integrated in existing networks. These companies are the only ones that are familiar with the entire spectrum of communications technology and the interfaces with networks and infrastructures. A compromise was found for the German telecommunications satellite system DFS-Kopernikus, where Siemens took overall responsibility for the system, while ANT together with MBB-ERNO formed an integrated project group for the development and manufacturing of the space segment, with headquarters in Backnang. ANT is responsible for the complete communications payload. We also want to continue our subcontracting business for components and for American satellite projects in order to satisfy our customers.

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EUROPEAN AFFAIRS

EUROPEAN TELECOMMUNICATIONS RESEARCH, PROJECTS ASSESSED

Paris LA TRIBUNE DE L'ECONOMIE in French 26, 27 28 Jun 86

[Article by Anne-Marie Rocco: "European Cooperation and New Technologies"]

[26 Jun 86 pp 1, 5]

[Text] Has Europe really caught up with the United States and Japan in terms of technology? Or has it contented itself with words, by increasing the number of already endless conferences and gadget study commissions? Born in pain--and budgetary grumbling--only 3 years ago, technological Europe contemplated a real success, to the point where initiatives had almost become overabundant. However, Europe is basically still seeking genuinely effective cooperation methods.

Integrated circuits, computers, robotics: The first concentration of the action of the EEC in the area of high technology research, the Esprit program was launched in 1983 for a 5-year period. And, right now, the Brussels officials are working on Esprit 2.

With the same enthusiasm, the European Commission is preparing a "strategic framework-agreement" (1987-1991) on the use of space, marine science and technology, advanced transportation technology, etc. And the specific activities are too numerous to count: Race (telecommunications), Brite (introduction of new technologies into traditional industry), Iris (identification of needs of users of new technologies), etc., the list is endless.

And to this must be added the Eureka project, the goal of which is to go beyond the research stage, to which the EEC limited itself, to produce new products on an European scale, from lasers to robots, as well as in the area of biotechnology. This is a project that applies beyond the EEC frontiers to all of Western Europe, including Sweden, Norway, and Austria. Attractive idea, difficult to implement: The next meeting will take place in London on June 30.



Why such one-upmanship? First, because of Europe's general lagging behind in the area of new technologies. "During the past 10 years," Jacques Delors declared to the Parliament at Strasbourg, "the level of growth in the production of high technology goods did not exceed 5 percent (in Europe), whereas it was 7.6 percent in the United States and 14 percent in Japan." In electronics, the companies in these two countries hold more than half of the European market and the position of domestic manufacturers has continued to lose ground: From now until 1990, they face the possibility of controlling no more than one-third of their domestic markets.

#### Mobilizing Projects

Second, because of the acceleration in technological change and the increasingly inextricable interaction of all disciplines: electronics, computer science, physics, and chemistry. "This high degree of enthusiasm for progress is inspirational," explained Pierre Aigrain, scientific advisor to the Thomson Group and former French secretary of state for research, at an Esprit meeting in Brussels. "For the European manufacturers, this can also inspire fear. The payback period for research and development is being reduced, and the critical mass a company must achieve to survive, today estimated to be 5 per cent of the world market, may tomorrow increase to 10 percent."

In this context, encouraging cooperation between European researchers--as the EEC programs currently do--is without doubt no longer sufficient. "It is necessary to do more and to go further": Everyone agrees on this point. However, what form will this take? Carry out large projects Japanese-style, blast the shackles off the domestic markets, and develop an European undertaking status: These three types of proposals are currently topics of European debates.

Going beyond the precompetitive research stage--i.e., that of the Esprit program--and defining common technologies is the stated goal of Eureka. An idea launched last year by France, its goal is to promote cooperation among European manufacturers for "large mobilizing projects," similar to the French "electronics product line" plan of 1982--such as the formulation of a European microprocessor, a standard automated factory, and supercomputers capable of rivaling those of America's Department of Defense.

This is also a step, according to a plan which remains to be defined, which is being recommended by the Brussels officials within the framework of the Esprit program.

This model is more or less directly inspired by the Japanese example, with its large programs dealing with robotics and supercomputers. Despite the budgetary restrictions recently



imposed (particularly for "fifth-generation computers") the unit of account for these projects remains at least \$100 million. This is encouraging for European manufacturers. However, will they agree to work under the conditions imposed upon Japanese companies?

### Technological Adaptation

However, although the Japanese example is no longer required to prove its efficacy in terms of "technological adaptation," it is perhaps because of the rigor of the principles which regulate these large projects, financed 50 percent by governmental agencies, with the remainder financed by the companies involved. The government thus allows companies to contribute to programs which individually would be impossible, although, on the other hand, it carefully controls their execution. This was explained by Professor Makata Nagao, of the University of Tokyo and member of the "fifth-generation computer" project, during the "technology days" of the Esprit program.

Whether at MITI--the most active organization in this area--or the Ministry for Postal Services or the Science and Technology Agency, the appearance of a promising "product line" results in the creation of an investigative committee that evaluates its advantages, possibly defines the market to follow, and determine the budget required for partnership with prospective companies.

After approval by the Ministry of Finance and the Parliament, an organization responsible for the project will be designated: It will act either as a public research institute attached to the ministry involved, or as an ad hoc agency, such as ICOT (l'Institut pour les Ordinateurs de la Cinquieme Generation [Institute for Fifth-Generation Computers]). It will negotiate the distribution of tasks within the private sector, supervise the results obtained by the companies, and make regular reports to the authorities.

At the end of the program, an independent evaluation committee will be formed: University professors, researchers in public and private laboratories, journalists, and economists will be invited to submit a report to the ministry responsible for carrying out the project, which will subsequently be made public. One of the evaluation criteria will, of course, be the number of patents the government is holding at the end of the program.

To what extent will Europe be capable of providing such a mobilization of energy? In particular, can it derive tangible results, capable of improving the competitiveness of European companies? This is one of the major questions posed by the Eureka initiative.

[27 Jun 86 pp 1, 8]

In Europe, the number of cooperative projects is increasing, although there are actually several conflicting schools of thought. Is it necessary to be inspired by the Japanese model, with its large, highly structured programs carefully controlled by the government? Apparently, this system is difficult to reconcile with Europe's political partitioning, as we wrote yesterday. As we discussed, certain people would argue for the construction of a "Common Market for Technology."

Isn't Eureka just another element in the already complex European structure, which is awkward and difficult to manage? One thing is certain: The project will not win all the votes of the heirs to the Schumann plan. Why set new goals, when all the goals of the Treaty of Rome have not yet been achieved? The EEC has, in fact, as its first job to create a European "Common Market." However, in practice, only agriculture has actually benefitted from frontiers' being opened. Before creating new structures, in the opinion of several Europeans, we should allow industry, and, as a first priority, the electronics industry, to take advantage of this free trade written into the law. This assumes that the standards of member countries will remain mutually compatible, as they are currently, and that public contracts will not be reserved only for domestic manufacturers.

This point of view is widely held in industry as well as in the administration of the EEC. This is also the point of view held by a few multinationals, such as Netherlands' Philips, whose former president Wisse Dekker stated regularly in public meetings, "European industry is structured around a small number of large companies which each has available an extremely large catalog," he would declare to anyone who wanted to listen. "However, the markets are fragmented and do not present a large enough field of investment.

"In the area of telecommunications, for example, there are nine large European companies, and just as many telephone switching systems. Less than 5 percent of the production is sold outside the frontiers."

Dividing up the demand results in a surplus production capacity--and in many cases lack of competition--for the European proposal. This is demonstrated by the figures: Theoretically the EEC represents 25 to 30 percent of the world market; however, when particularisms are taken into account, there are only domestic markets, each of which is no more than 5 to 6 percent. It is from these "lightweight" markets that the companies must draw up their strategies. These strategies are dwarfed by the American and Japanese giants.

## Particularisms

The old idea for the Common Market is today returning to the agenda, although in more sophisticated forms than simple tariff dismantling, which in itself is not sufficient to ensure the actual opening of markets. The standardization effort, for example, has already resulted in significant results in terms of computers. Supported by the European authorities, the 12 main companies in the EEC have initiated a common standard dubbed "OSI" which abolishes (at least in part) the traditional inability of computers to communicate with each other. This may become an international standard because the two largest manufacturers in the world, IBM and Digital Equipment, have decided to participate. Digital made it official when it introduced its first products incorporating the OSI standard last month.

## Reduction of Procedures

Nevertheless, the member countries of the Community are attempting, within the framework of the Race program, the experimental phase of which was launched at the beginning of summer 1985, to cooperate in defining future telecommunications networks which would allow sound images and computer data to be transmitted on the same channel. However, this is a long and exacting task: These networks will not be operational before 1995.

In addition, other shorter term projects have been undertaken which will result in a minor opening in the European telecommunications market. After several years of discussions, on 9 June the Ministers for Industry of the Twelve agreed to a Europeanization of the approval for certain telecommunications equipment. A directive on this subject at present concerns only terminals connected to networks, such as Minitels, facsimile machines, and telex machines. It will immediately provide for the mutual recognition of technical tests carried out by each Postal Service and Telecommunications administration and--within 2 years--the mutual recognition of approvals.

This decision has been welcomed with relief by the manufacturers.

"At the present time," explained Francois Betit to the CGE, "if we expect to export Minitel to Europe, it will be necessary to solicit the agreements of 12 administrators, even though there are already more than 1 million in operation in France!" Thus there will be a reduction in procedures, although for only a small proportion of equipment: With regard to heavy equipment (such as telephone switching boards), there is still a long way to go.

## New Products

It is actually quite complicated to departition a market when it has been partitioned for many years, if not only for the reason that an existing manufacturing site cannot be modified overnight. It is easier--at least on paper--first to establish common standards for new products. And it is good that Europe is attempting this with high-definition television, a process which could replace the current system towards the middle of the next decade.

This is a big gamble for European television manufacturers, whose decline over the past 15 years can be partially explained by the existence of two incompatible standards (Pal and Secam) which divide Europe. A mistake or survival, if not success in this industrial sector, will occur through the expansion of product lines.

In the market of the future, Europeans are courting catastrophe. At the last session of the International Consultative Committee on Radiocommunications (CCIR), held in Dubrovnik in May, the Japanese wanted to have the standard developed by their manufacturers to be adopted as the future world standard. This was definitely rejected by the European companies, who, on the contrary, want a standard compatible with their own projects to be adopted: The Japanese offensive, which was supported by American representatives, was finally rejected.

A European standard which can be submitted to international authorities within 2 to 4 years remains to be defined. At the Eureka summit to take place in London next Monday, joined together in the same consortium, the main European consumer electronics manufacturers will propose a joint project for developing this new technology. Among the participants will be Thomson and La Radiotechnique of France, Thorn-EMI and BBC of Great Britain, as well as Philips (Netherlands), Electrolux (Sweden), Zanussi (Italy), and Bosch-Fernseh and Grundig (West Germany).

Here is a test case for Europe: The survival of an industrial sector employing 130,000 people in the EEC depends to a large extent on the ability of these manufacturers to work together and the determination of the Member States to support this project. This case sets a valuable precedent.

[28 Jun 86, pp 1, 15]

Esprit, Race, Eureka, etc. In Europe, joint projects are multiplying, although there are conflicting schools of thought. Some refer to the Japanese model in advocating the voluntary launching of "large-scale projects." In contrast, others recommend the creation of a "Common Market for Technology" by

agreeing on common standards, which tariff dismantling has not been able to accomplish. A working hypothesis which is perhaps the most difficult to achieve consists of the constitution of truly European companies.

"Europe's real problem," said Robb Wilmot, chairman of Britain's ICL computer group, "is not the fragmentation of the market, but the fragmentation of supply." Observing the survival depends on controlling a certain minimum percentage of the world market, Mr Wilmot believes that "this critical mass is difficult to achieve because each European country wants to have its own domestic champion in any given sector. Whereas in Japan three or four competitors are selected for each market, in the United States, survival of the fittest determines natural selection." In contrast to the Japanese-style consensus and the effectiveness of California venture capital, the Old World suffers from its inability to adjust its companies to truly European dimensions and status, and sometimes is only able to launch lame ducks.

Behind this verdict hovers the memory of several abortive attempts, such as the Unidata venture in 1973, which proposed the creation of a large European computer group by bringing together Germany's Siemens, Netherlands' Philips, and France's CII.

This memory is even more bitter because the industrial geography of Europe leads to another observation: In the area of "information technology," the only genuinely European companies are American multinationals such as IBM, ITT, and Texas Instruments. These are the only ones to have constructed factories and research centers with cosmopolitan management over the whole continent.

#### Concentrations

There is more disquieting news. Not only are multinationals European in Europe, taking advantage of the economies of scale they can thereby realize, but in their native country, they contribute a portion of their profits to joint projects, because they realize that they alone cannot assume the increasing costs of research and industrial investment. Twelve of the principal electronics manufacturers and users (Honeywell, Control Data, Motorola, etc.) founded the Microelectronics and Computer Technology Corp. (MCC), a research center located in Austin, Texas, which is carrying out several programs for periods of 6 to 10 years: computer-aided design, software, computer architecture, artificial intelligence, etc. Over the last 3 years, 9 new partners joined the 12 founders, and other similar organizations have been created: Semiconductor Research Corp., Microelectronics Center of North Carolina, etc. This is a real revolution for American industry, which will request a complete revision of jurisprudence on the sacrosanct antitrust law. In parallel with

these new joint projects, partially inspired by the Japanese example, a new wave of industrial concentration is taking form: IBM's holdings in Rolm (private telephone), Intel (electronic components), and MCI (trunkline communications), and the Burroughs-Sperry merger (computers) are the most striking examples.

As a result of the renewal in vitality, certain alliances are beginning to be created in Europe. In the area of telecommunications, Italtel (Italy), CGE (France), Siemens (West Germany), and Plessey (Great Britain) have agreed to work together on basic technology--for their next generation of telephone switching equipment. Eventually, four different products will be brought out, although they do not have at least a joint section representing 30 percent of the total cost.

Several days ago, four transmission equipment manufacturers (cables, directional radio links) followed in the footsteps of the switching equipment manufacturers: Sat (France), Telettra (Italy), General Electric (Great Britain), and ANT (West Germany) by agreeing to share their research efforts. This is a genuine sharing of work, with each participant having free access to all the results obtained.

In the same spirit, specialists in private telephones--France's Jeumont-Schneider, Italy's Telettra (Fiat Group) and Germany's Telenorma (Bosch Group)--are also developing joint parts for their future equipment. And they will go even further. "At the same time," explained Paul Denis, officer of the telecommunications branch of Jeumont-Schneider, "we are attempting to obtain a balanced opening of the domestic markets by franchising German products and Germanizing French products. The files are ready and will be submitted within a few weeks to both Postal Service and Telecommunications administrations."

#### New Plans

In computers, Bull (France), Siemens (West Germany), and ICL (Great Britain) are pooling their research efforts in several areas, such as software engineering, artificial intelligence, and expert systems. There are few long term projects currently underway. However, a joint research center has actually been created, with a budget of nearly 50 million francs; it is located in Munich and approximately 40 researchers work there. For integrated circuits, Netherland's Philips and Germany's Siemens have also agreed to cooperate by sharing research expenses--9 billion francs for 5 years at the lowest estimate--and dividing the work in the industrial area, each providing a certain type of components.



Nevertheless, there may be solutions possible other than the simple bringing together of a few large groups of European electronics manufacturers (always the same ones). This is, in any case, what Robb Wilmot is attempting to demonstrate, with the new company recently created under his sponsorship: European Silicon Structures (ES2). In its industrial plan, the task of ES2 is to design and manufacture custom-made integrated circuits (as opposed to standard circuits) within the extremely short time of about 2 weeks.

However, its ambition, above all, is to be a truly European company: head office in Munich, research and development in Great Britain, and manufacturing in France, near Aix-en-Provence. The same is true for the capital, which will be called up from all the EEC financial markets: \$2.6 million in venture capital, 35 million representing the share of the 7 large European industrial groups (Olivetti, Philips, Teleonica, British Aerospace, Bull, Brown Boveri, and Saab-Scania), 30 million provided by the European States (including 10 million in subsidies and 20 million in loans, particularly for Eureka).

#### The European Undertaking Status

This new company, which has already recruited personnel of five or six different nationalities, is not free of risks or weaknesses. Some have criticized it for encouraging the spectacular, others for primarily seeking public financing within the framework of Eureka. It has, in any case, the merit of raising the question of the European Undertaking Status--nearly nonexistent, except for the recent and timid institution of a European "Economic Interest Group" (EIG).

"For the past year, I have seen how difficult this type of organization is to start up," explained Mr Wilmot. "We need a European status which applies to 'start ups' as well as to joint ventures created by existing companies. We need harmonization of fiscal and social laws to allow the entrepreneur to work under identical conditions throughout the Community." A desire to which Mr Wilmot also adds some other suggestions: the establishment of aid--or fiscal relief--for companies fulfilling the criterion of being European; the creation of new resources at extremely low rates (as in Japan) by means of institutions such as the European Investment Bank; the development of a "Buy European Act" which would take the place of domestic preferences currently practiced by governments.

Creating European companies on a European scale, truly opening markets, and defining joint products: As the technological vice tightens, the thinking on the subject the different types of cooperation is continually being enriched.

And, contrary to what is being said by the pessimists, concrete actions are beginning to be taken. Esprit, as originally planned, was perhaps imperfect. Certainly this program suffered from the imprint of European bureaucracy. The manufacturers are the first to admit that it gave rise to a pattern, the results of which are being felt today with the increase in joint ventures of European companies. A development which, if it continues, could mark a turning point in Europe's industrial history. Because, until recently, in the area of new technologies, most agreements reached by Old World companies involved American and Japanese partners. We know what this type of situation leads to in terms of economic domination.

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EUROPEAN AFFAIRS

EUROPEAN COOPERATION IN TELECOMMUNICATIONS RESEARCH ADVOCATED

Paris LA TRIBUNE DE L'ECONOMIE in French 30 Jun 86 p 4

[Michel Carpentier (Footnote 1) (Chairman for Research and Technology of the European Commission) is interviewed by Marc Paoloni: "Technological Cooperation Is an Obligation"]

[Text] [LA TRIBUNE] Last 9 June you announced "a fantastic step" with the agreement between the Ministers for Industry on the mutual recognition of terminal conformity tests. On 10 June, the Twelve rejected the Community 5-year program for scientific research and technology. How can this be explained?

[Mr Carpentier]. On 9 June, there was a very important step forward in the creation of a "European telecommunications area." Just 2 years ago, no one would ever have thought that the telecommunications administrators of the Twelve could accept common specifications being applied to their equipment, that testing laboratories could cooperate, and that the PTT would accept testing carried out in another country as valid for equipment connected to their networks. This involves the convergence of several elements: technological, economic, and political.

On 10 June there was a policy debate, since the commission had not yet presented a formal proposition, thus the question was of a different nature: What added value could the Community assign to the implementation of research and development? Of course, the answer is naturally more complicated than just that. First, because the contributions of the State may be different, depending particularly on their degree of industrialization: second, because this will result in four contributions to the Community budget, which is currently encountering some difficulties.

[Question] Due to the lack of funds, are fundamental research and pre-industrial research condemned?

[Answer] No, it's more complicated than that. Cooperation for basic research at universities is going well. This "stimulation" program, proposed by the Commission, has been well received, as were programs concerned with improving competition. Why? Because, as is the case for Esprit, Race, and Brite, cooperation in the area of high technology is an obligation, taking into account the extent of investment required, which necessitates financial cooperation and economies of scale.

The community acts as both a catalyst and a political integrator. To place new products on the market, a strategy beginning 10 years in advance is required. A typical case is that of "high definition" television.

If the Europeans had begun work preparatory to the definition of a worldwide standard 5 years ago, we would not now be in our present position with regard to the Japanese and the Americans. This is also true for a whole range of products: integrated circuits, new materials, optoelectronics, etc.

[Question] With regard to Race (telecommunications), the Germans seem to be dragging their feet. Have the companies decided to go as far as sharing their secrets up to and including the product itself? Is there a risk that the chain might be broken?

[Answer] Yes, a risk exists. One company might feel sufficiently strong in its domestic market and in one of its non-European foreign markets to achieve the two categories of economies required at present, economies of scale and economies of diversification. Even so, this contributes an additional risk. The precarious state of a foreign market can be opposed in this sense by the security provided by an "internal" European market guaranteed by the EEC treaty. Some companies could, for example, place products on the American market. However, I'm not sure that the United States, because of its large trade deficit, is not tempted to take measures related to protectionism or to seek "sectorial" balances. What would then become of this market?

[Question] Doesn't the persistent disagreement between the Twelve and the Commission on the extent (almost 70 million francs) and content of the 5-year plan run the risk of calling into question the continuation of these precompetitive programs?

[Answer] There is a dual risk that a critical mass will not be achieved and that this will take an excessive amount of time. Nevertheless, I am confident in the wisdom of the governments who are aware of the serious nature of the absence of a decision or a decision made at too late a stage in this area.

[Question] Will this precompetitive European research leading to common standards and concerted production result in a "captive" market which risks incurring the wrath of the United States and Japan?

[Answer] No, because we respect the rules of the international game. We are the most liberal continent in the world. For the case of telecommunications under discussion, we have an increasing trade deficit with the USA and Japan.

In 1985, it reached 650 million units with the USA and 150 million with Japan, which represents an increase relative to the previous year of almost 30 percent with the USA and 65 percent with Japan. They can't tell us Europe is closed.

As far as "the captive market" is concerned, the Community has called it off in terms of standards by relying on the OSI model.

[Question] However, is it realistic to build a community program in 5 years, to launch a series of Eureka projects, while voluntarily ignoring the potential content of the American program? By choosing to consider it as a simple "political problem"

[Answer] The participation in SDI is of a political nature, although SDI represents only one project among many others in the enormous number of projects (\$35 billion financed by military credits in the United States).

Furthermore, the Americans have invited the Europeans, although on their terms, particularly in the area of technology transfer. Although there are countries which have refused to participate as such in SDI, they have frequently allowed their companies to participate depending on the advantages.

[Question] To go back to European technological cooperation, it has been accused of providing financing to large companies which could have achieved the same cooperation without Community assistance.

[Answer] This is incorrect. Cooperating on the European level costs at least 20 percent more. Thus, European companies are not in an exceptionally good position, although they have sprung back recently.

Within the framework of the Esprit halfway-point evaluation, 20 percent of the participating companies have said "we would have done this work anyway," 30 percent said "we would not have done it," 50 percent said "we would have done it, but to a lesser extent."

As for the PME's, in Esprit they contribute 50 percent to the projects. What remains to be seen is if a PME, although it contributes only 10 percent to a project, will receive 100 percent of the results. Even I was quite surprised to see such a large number of PME's getting involved in precompetitive research development which did not exactly correspond to the nature of their activities.

[Question] In this context, what do you think about the CGE-ATT project? Is an agreement with such a large company risky?

[Answer] Undoubtedly, ATT is attempting to penetrate the European market, just as it is attempting to reenter the Japanese and other markets. I do not know enough about the nature of the agreement being negotiated to make a statement on this particular case. In general, I think that Europe should develop a large market, strong industrial structures, and agree upon a considerable level of technical activities. Do you know how much money IBM has allocated to research and development in 1986? \$3.2 billion. And ATT? \$2.5 billion. It is also necessary to be capable of negotiating with standardization agencies in such a way that our point of view is taken into account on an international level.

Such is the ambition of the Community. I think that it is now supported and shared by the economic participants as well as by the political leaders of our continent.

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EUROPEAN AFFAIRS

FRG, FRENCH, SWEDISH COMMUNICATIONS FIRMS TO SHARE DEVELOPMENTS

Duesseldorf HANDELSBLATT in German 2 Jul 86 p 15

[Article by "lt": "Exchange of Findings in Communications Technology"]

[Text] Stuttgart, 1 July 1986--ANT Nachrichtentechnik GmbH [Communications Technology Ltd], Backnang and Robert Bosch GmbH, Stuttgart, as partners in a consortium to develop a cellular radio system for the FRG Postal Service, have reached agreement with the Swedish firm of Ericsson Rado Systems AB to proceed in a coordinated manner in this field and to exchange their research findings. This, according to an announcement by ANT. ANT/Bosch is already cooperating in this field with Matra and LCT, two French firms, and Telettra, an Italian firm. Last year, sales volume at ANT climbed 14 percent to more than DM 1 billion. The annual surplus climbed to DM 30 million from DM 22.5 million in the year before. At this time, unfilled orders amount to DM 1.6 billion with foreign orders making up for 37 percent of the total. For 1986, the firm's management expects a further increase in sales by about 17 percent. During the first 6 months of this year, sales totaled DM 530 million or almost 30 percent more than during the same period last year. ANT spends 13 percent of its annual turnover for R & D. In the past 2 years, 1,000 additional jobs were created at the four plants in Backnang, Wolfenbuettel, Offenburg and Schwaebisch-Hall. At this time, the firm has a total work force of some 7,000. The capital stock in the amount of DM 200 (150) million is held by Bosch and Mannesmann (40.8 percent each) and by Allianz-Versicherung [Insurance Co] (about 18.4 percent).

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EUROPEAN AFFAIRS

BRIEFS

FOUR EUROPEAN FIRMS SIGN TELECOMMUNICATIONS AGREEMENT--The FTG's ANT, Britain's GEC, France's SAT, and Italy's Telettra, four leading companies in the European telecommunications industry, have drawn up an agreement to optimize their activities and investments in research and development in order to jointly deal with the strategic programs of the European Community in telecommunications transmission systems. Among the main reasons for the commitment by these companies to a cooperative effort for mutual development and utilization of basic and applied technologies are the creation of an integrated European communications system, the development of technological programs for telecommunications [for example, "Esprit" and "Racq], the progressive internationalization of those markets opened to European industry, as well as the increasing investments necessary for the development of new generations of telecommunications systems and the problem of availability of funds to develop these new systems. Although the four companies will keep their previous commitments with other firms, this agreement is important because it highlights the mutual effort made by these companies to increase the industrial and competitive capabilities of Europe in the telecommunications field and to establish a framework in which definite agreements for specific research projects can be reached. [Text] [Rome IL TEMPO in Italian 19 Jun 86 p 24] 8610/12851

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CYPRUS

BRIEFS

XINHUA-PIO AGREEMENT--Press and Information Office (PIO) Director Mr Kipros Psillidhis, with the correspondent of the XINHUA Chinese News Agency, (Mr Jin Bihua), signs [as published] an agreement on the reception of the English XINHUA transmissions. During the signing ceremony at the Chinese News Agency Office, Nicosia, Mr Psillidhis expressed the conviction that the agreement would contribute to a wider understanding in Cyprus of the positions and views of this big country and would constitute a valuable source of information for the Press and Information Office owing to the wide network on XINHUA correspondents and offices. [Text] [Nicosia CYPRUS MAIL in English 11 Jul 86 p 3 NC] /12913

CSO: 5500/2708

FINLAND

## STATE ASSURES NOKIA KEY ROLE IN TELECOMMUNICATIONS PROJECTS

Helsinki HUFVUDSTADSBLADET in Swedish 23 Jun 86 p 7

[Article by Erik Wahlstrom; first paragraph is HUFVUDSTADSBLADET introduction]

[Text] This concludes our series of articles on various aspects of the TV of the future. Previous articles appeared in HUFVUDSTADSBLADET on 6 May, 20 May, 24 May, and 9 June. The article on 24 May was written by Ragnar Ahlberg. All the rest were written by Erik Wahlstrom.

"I hope that the officials who handle TV and satellite matters will show healthy partiality in favor of Nokia."

That jocular remark formed the conclusion to a presentation of Nokia's role in the Tele-X project by project manager Harry Herlin at the Otaniemi Institute of Technology on 17 March.

Herlin's desire was fulfilled. For one thing, the government's decision on our third TV channel shows that Nokia does in fact enjoy the state's special protection.

### Government Debate

It was that (in addition to the fact that Finland's people do not need a third TV channel of the type planned) which helped persuade Prime Minister Kalevi Sorsa and especially Minister Paavo Vayrynen to object to giving our third TV channel to the Television Three corporation, which consists of the Finnish Broadcasting Corporation, Commercial Television, and Nokia. As the committee was winding up its work, Vayrynen tried to get Nokia removed from the corporation. Despite that, the government decided on 5 June to give the channel to Television Three in that corporation's original form.

### Dubious Principle

The principle is a dubious one. The state controls a resource consisting of two potential TV channels besides the two that already exist. The state is deciding that only one of the two potential new channels will be used, and the

state is giving that channel to a corporation in which the private firm of Nokia has an interest.

The private firm is therefore receiving a big gift from the state. Why?

### Pay TV

It is primarily Salora-Luxor, one of Nokia's affiliated companies, that will profit from Television Three.

The big deal for that company is the pay TV system, which affects consumers mainly in the form of the decoder needed for watching the channel's pay TV programs. The decoder is the little gadget (jokingly called the "black box" by the public, although the company's own marketing people like to give it the more positive name of "programming key") that is the item for sale.

The black box deciphers a coded signal from the TV transmitter. A computer keeps track of which customers have paid their latest bill and cuts off the signal to those who have not done so.

### Golden Triangle

At Television Three, project manager Jaakko Paavela says that within 6 years the company will cover from 80 to 85 percent of the country's population--that portion living in what advertising people call the "golden triangle"--between Helsinki, Tampere, and Turku. He also says it is known from experience--with Helsinki TV, for example--that about 25 percent of households with a TV set usually buy a decoder.

Since there are over 1.8 million TV licenses in the entire country, that translates into just under 360,000 decoders within the "golden triangle." When (or if) Television Three reaches the point of covering the economically unattractive parts of the country outside the core area, another 90,000 may be bought in those areas.

These "black boxes" are an integral part of the channel's technical system, meaning that one cannot walk into a TV shop and choose the brand one considers most advantageous. One must take Television Three's black box at Television Three's price. That price is a part of the marketing program for Television Three as a whole, of course, so it cannot be set too high. But let us hope that it will not include the usual "Finland surcharge" that exists on almost all goods in our monopoly-loving country.

Properly speaking, of course, there is no general value from the standpoint of cultural policy in having as many people as possible acquire a black box giving access to Television Three's pay TV repertoire of feature films and other entertainment--quite the opposite, in fact.

The current bet is that the black box is going to cost the consumer about 400 markkas.



## In Finland's Interest

Viewing the matter from the international angle, one can say that to a degree, Nokia's interests coincide with those of Finland. If there was open bidding to supply Television Three with black boxes, it is very likely that the contract would go not to a domestic firm but to a foreign one--French or Japanese perhaps.

The state's protectionism is therefore keeping that piece of the electronics industry pie in Finland and backing Nokia's competitiveness internationally.

## Participating in Development

"We are present wherever things are happening on this front," says Salora-Luxor's manager, Heikki Koskinen, "and that is why we also took a minority share in Television Three at the invitation of the Finnish Broadcasting Corporation and the RTV [Commercial Television]."

Salora also supplied Helsinki TV's new pay TV system, which covers several channels simultaneously. Television Three will get along with a simpler version, since only one channel will be involved.

Koskinen says that the Japanese have concentrated primarily on their own domestic market and, to some extent, on the United States. On the other hand, the United States has a very strong electronics industry of its own.

Koskinen says: "We are in a very strong position in Europe when it comes to pay TV applications, and in the Nordic Region we are clearly the leaders in the industry. Pay TV is part of our satellite TV system."

Salora-Luxor has no competition in that field, either in Finland or in the Nordic Region.

"You might find our closest rival in France," says Koskinen.

## Tele-X

The Tele-X satellite will be placed in orbit over the equator at latitude 5 degrees east [as published] in July 1987 by a French Ariane rocket, if the timetable is not delayed by the recurring problems with the launch rockets.

In Finland, Nokia, Teleste, and Valmet are participating by supplying various sophisticated ground and space systems.

## Costs Reduced

"The cost of Finland's share of the Tele-X project was sharply reduced when our firms were negotiating with the Swedes," says Veli Santomaa, acting head of the telecommunications laboratory at the State Institute for Technical Research (STF).

He says: "No one really expects to make money on the project, at least in Finland. We joined in anyway. We viewed it primarily as a way of getting our feet wet and thereby improving our know-how. The Ministry of Trade and Industry joined in because it is important that we stay abreast of developments with the idea of obtaining contracts for Finland in the future. This is an extremely competitive industry. It is very hard to participate in the game through free competition."

It is Santomaa's telecommunications laboratory which is cooperating with Valmet and Teleste in the Tele-X project (Nokia has a direct contract with the Swedish Space Corporation). The instrument through which state money is channeled to the project is a company called the VTT Technology Corporation, which was established in 1984 for that and similar purposes. The reason is that the STF itself cannot be responsible for bank guarantees, insurance, and similar necessary monetary transactions.

The state-owned high-tech foundation known as Tekes also participates as a financial backer.

Teleste and Valmet are cooperating with the STF as subcontractors to the Swedish firm of L.M. Ericsson, which is in charge of the ground equipment for Tele-X.

A complicated system of suppliers and subcontractors is involved. The Space Corporation has signed a contract with Ericsson, which has signed a contract with Valmet, which has signed one with the STF's technology company, which has signed a contract with the STF.

Whose Money Is it?

That being the case, how can one distinguish between private and public money in this symbiosis of private and state-run research?

"That is what is called a good question," says Harry Herlin. "When Valmet signed a contract with Ericsson, it was able to make a somewhat cheaper offer than would have been possible otherwise, since the STF's contribution to the work is sponsored to some extent by the Ministry of Trade and Industry.

"We at Nokia also use the STF's experts on other projects, because in that way we do not have to hire people permanently. Instead, we can use researchers whose personnel costs are paid by the STF. Many times we may have a guy from the STF who stays here 2 or 3 years working for us."

Are there no private consultants who feel that the STF has an unfair competitive advantage as a state institution?

"Many times the know-how involved is so highly specialized that there is only one expert in the field in Finland, namely a researcher at the STF," says Herlin.

And the situation in the field of information technology is such that Finland's few high-tech firms encounter most of their competition abroad, not among themselves.

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CSO: 5500/2700

FINLAND

VIDEOTEXT SERVICE TESTED IN PROVINCE

Helsinki HELSINGIN SANOMAT in Finnish 22 May 86 p 31

[Article by Jyrki Maunula: "Videotex Arrives at Farmhouse in Hame. Timber Agreement, Weather and Radiation Levels to Be Found in Computer"]

[Text] Times have changed in a farmhouse in Hame: a screen in the corner of the living-room tells the farmer everything possible from frost penetration and soil temperature to the amount of dew and even instructs him, step by step, about what ought to be done right now.

On the screen the farmer can also see the latest information on the amount of nuclear fall-out in this province, the sale prices of machinery and the most important addresses. It is no longer necessary to go out and watch the sun set over the corner of the cowshed in order to forecast the weather. The machine will tell that too, both the short and the long range forecast.

Currently 17 farms in Hame and Uusimaa have videotex equipment glowing on the table: a keyboard that looks like a typewriter, a television screen and a printer which prints out the desired data on paper.

The farms are only testing the equipment, but they strongly expect it to be the trend of the near future. Backing the experiment are the Ministries of Finance, Transportation, Agriculture and Forestry with about 30 other institutions.

One of the farms participating in the experiment is the Eskola farm at Janakkala's Tervakoski. Farmer Esko Vainio registered immediately when he heard that volunteers were sought. The experiences from the first couple of weeks are nothing but positive.

"Every day Videotex seems more and more a necessity and my fingers are itching to get one for myself," Vainio tells enthusiastically.

Above all, Vainio is interested in the latest weather forecasts, but the family also keeps finding data on "current events in agriculture." In that program the closest agricultural center gives daily advice, reminds the farmer of the most urgent tasks and warns him of eventual problems.

"The computer has surprised me many, many times with its wisdom. Just the other day, out of curiosity I typed, among other things, the headline MTK [Agricultural Producers Association] and there I found the entire, new farm income agreement, and also the regulations concerning clearing fields for cultivation which are on their way to the Parliament. I have not found such precise information about the details of the timber trade agreement elsewhere, not even in the papers. Of course I took a print-out on paper," tells Vainio.

#### Latest Information on Radiation

Videotex also keeps the farmer informed of the latest nuclear fall-out but not only of the figures but also of the recommended procedures. "The farmer has no reason for worry. Last night's rain did not increase the fall-out. The iodine in consumer milk remains on the low level of approximately 10-20 Bq..."

Vainio tells us that he can order the computer to give him information necessary for this farm, in this part of the province. "The rains may hamper spraying of the weeds in autumn grain. The stalk reinforcer can now be combined with this spraying..."

"It is an excellent reminder and, of course, also an instructor, although an old farmer may think he knows everything."

Aulis Ansalehto, agronomist and videotex specialist at the agricultural center of the Häme province, is certain that in the next decade there will be thousands of computers on farms.

"In France there are already 10,000 computers on farms and the experiences are excellent everywhere. The whole equipment package costs 10,000 markkas, so that even the price is not an obstacle for getting this new tool."

Before long the applications of videotex will become more versatile. It is only the question of a short period of time before it can be used, for example, in making bank transactions at home. It will also convey more and more business information, from sales to product demonstrations.

"It is certain that in the next few years a farmer can make his purchases without leaving his own corner in the room, just by typing."

"No other equipment, phone or radio, can be so fast and yet provide the user with the choice of versatile and important information," assures Vainio.

12956

CSO: 5500/2705

FINLAND

HELSINKI MOBILE PHONE NETWORK EXPANDS

Helsinki UUSI SUOMI in Finnish 4 Jul 86 p 10

[Text] Experiments with a new NMT 900 network will begin in Helsinki in the fall. Compared with the current network of a couple of hundred channels, the new network will comprise several times as many.

NMT mobile phones are particularly popular in the metropolitan area where they number about 20,000. In the entire country there are about 41,000 mobile phones.

In the metropolitan area the NMT calls pile up and are cut off around 4 pm, due to the overloading of the channels.

A caller is also frequently cut off when the car moves from the area of one small-unit network to another. The smallest small-unit networks, for example, cover only part of Mannerheimintie.

12956

CSO: 5500/2705

FRANCE

NEW GOVERNMENT WEIGHING ERICSSON PACT AS AT&T, CGE ALTERNATIVE

Stockholm DAGENS NYHETER in Swedish 13 Jun 86 p 11

[Article by Bjarne Stenquist: "French Interest in AXE System"]

[Text] Ericsson Board Chairman Hans Werthen will be going to France next week to discuss a possible cooperative venture between Ericsson and CGCT, a French state-owned telecommunications firm.

Werthen's trip is the result of efforts on the part of French Industry Minister Alain Madelin last week to negotiate a European alternative to the cooperative pact soon to be concluded between AT&T and the French CGE. Werthen will meet with Madelin next week.

CGE, together with its subsidiary CIT-Alcatel, is clearly the largest French manufacturer of telephone exchanges with 84 percent of the French market. The remaining 16 percent is being supplied by CGCT, a former subsidiary of ITT, which came under state ownership in 1982.

CGCT has a lot of problems and faces the threat of having to close down. Its telephone exchanges are outdated and the company is suffering great losses. Ericsson negotiated with CGCT last fall and winter with respect to the joint manufacture of Ericsson's AXE system.

These negotiations were put on ice when the former socialist government recommended a cooperative pact with AT&T. According to the terms of this pact, AT&T's digital telephone exchanges, ESS5, would be manufactured in France and replace the outdated CGCT exchanges. In return, AT&T would aid CIT-Alcatel's entry into the U.S. market.

After much agonizing, the new Conservative government has decided to try once more to establish a cooperative pact with a European partner. It has contacted Ericsson as well as Siemens in Germany.

"We are not yet certain of what the French want," said Werthen.  
"I am primarily going down to listen. We have the advantage of

having the operative digital system AXE, which has been sold to some 60 countries. We will have to see if this suffices to once more get into France.

"We are prepared to become part owner with a lesser share in CGCT if this will result in a pact," Werthen continued.

#### Privatization

Jan Stenberg, Ericsson public telecommunications area sales manager, feels that the French government is interested in the privatization of both CGCT and CGE.

"This would give us the opportunity to work with a French partner willing to assume the greater ownership responsibility and, together, we would become CGCT partners.

The French government also requires that a foreign partner further export telephone exchanges manufactured in France to third countries.

"This would be an advantageous solution for us," said Stenberg. "AXE could thus be marketed with the aid of generous French export credits in some cases."

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CSO: 5500/2689

SPAIN

TELEFONICA LAUNCHES NEW FINANCING PROGRAM

Madrid ACTUALIDAD ECONOMICA in Spanish 26 May 86 pp 88-90

[Article by Jeronimo Martel]

[Text] By the time this article appears, Telefonica will certainly have announced an issue of convertible bonds--just a few days after having auctioned off the Amper stock on the Madrid Stock Exchange. And in June it is planning to launch its Eurobonds, and it hopes to begin its issue of very long-term debentures.

This is not a case of innovation for the sake of innovation, which is so much in fashion in financial markets and treasury management. Telefonica is innovating for the precise and two-fold purpose of increasing flexibility and lowering the cost of obtaining funds, both short- and long-term. So simple--and yet so difficult.

On 8 May it conducted an absolutely unheard of operation; an auction of Amper stock and its simultaneous quotation on the Madrid Stock Exchange. Then, immediately afterward, it is going to launch an issue of some 20 billion pesetas in convertible bonds, whose innovative feature consists in the immediacy of the conversion option terms--3, 6, 12, or 24 months--introduced a short time ago by the banking industry--by the Central Bank to be specific--and in restricting itself to an alternative between short-term investment bonds, in competition with the current yield in monetary assets, and an invitation to enter in an expansion with a premium, which has just come back on the market with Uniasa from the agribusiness sector.

The Amper Operation

A specialist told ACTUALIDAD ECONOMICA how "absolutely unprecedented this operation is anywhere. In any case, it is the most original in the history of Spain's stock market." The English British Telecom operation was not a market operation, so the official sale price of the stock more than doubled during the first day it was offered on the market. In this case, Telefonica negotiated with the Madrid Stock Exchange to apply the auction procedure in a unique situation. According to international financial sources consulted



by ACTUALIDAD ECONOMICA, this operation "could serve as a pattern for other impending operations. One very significant example might be the privatization of French companies."

Even earlier, with an eye toward its later expansion, Telefonica offered its customers one Amper share for 20 new shares in the company at 150 percent; this brought it 35,000 new stockholders. In the later stock market auction, it used 1.5 million Amper shares for a competitive segment and a half million for another noncompetitive segment designed for small investors, for the sake of greater diversification. This procedure was so successful that the shares of a company that was almost in a state of technical bankruptcy, which had sold in a preliminary trial sale for 150 percent, reached an average price of 344, based on a marginal price of 500! The noncompetitive segment withstood an assault more intense than the storming of the Bastille; it drew up to 6,000 orders for an average of 3.5 million pesetas, remaining prorated at 17 percent.

Javier Monzon de Caceres, Telefonica's deputy director general for finance, explained the philosophy behind the Amper operation; "Telefonica does not have the capability for a permanent industrial group, as its chairman pointed out when presenting the latest expansion to the press. Therefore, it has limited itself to improving and refloating Amper, by opening it up on the market with a very balanced stock structure. Right now the major Spanish banks--only five of them, because of the absence of Vizcaya and the Peoples Bank--hold 15 percent of its capital. Telefonica has another 15 percent; institutional investors hold 30 percent, and individuals almost 40 percent."

Incidentally, Telefonica made an additional profit--for its stockholders and also indirectly for its customers--through this dual operation: first in its own expansion and then in this original stock market auction. In other words, it made its deal not by paying, but by collecting.

#### Eurobonds

Telefonica's Eurobonds operation is another unusual operation in terms of Spanish borrowers, and is a highly innovative market operation even for the most sophisticated international markets. Combined with its quotation in foreign stock exchanges, Monzon considers this a "stunning operation."

While reserving its control for itself--in the not strictly administrative area--and dealing with only 10 banks, Telefonica with this operation managed simultaneously and jointly a line of credit--both a normal line and a special auction line--and an issue of Europaper in auction segments in the amount of \$250 million.

Then, though it was signed during the last week in April, in June the paper segments were issued until the total value was almost depleted.

This operation ranges from the "club deal" formula with a closed group of banks--in this case simple distributors, except that Telefonica does in fact have the line of credit--up to a revolving credit with a "swing line" mechanism: the credit itself is not actually charged, but there is a voluntary mechanism making it available both in London and in New York at same day values. This also includes an automatic "multi-swaps" mechanism which makes funds available in any currency through term or forward markets, independently of the fact that the issue may be listed immediately in dollars and ECU [European Currency Units]--and also, in more unusual cases, in Swiss francs.

Obviously, even though Telefonica has not released more explicit details on this operation, it is designed on the triple theme of flexibility, lowered costs, and a shift to commercial paper in the U.S. domestic market, a sort of Spanish dream that has come to nothing before.

On the subject of lowered costs, Telefonica has kept control for itself, while the bank distribution consists of only 10 banks, three of which are U.S. investment banks, which are obliged by their own laws to trigger a bank "dis-intermediation" cost, and finally, the revolving and swing lines will eliminate any superfluous costs, so that it may be understood with complete confidence that the cost of the operation will essentially be that of a bare LIBOR [London Inter-Bank Offered Rate] with all costs included. On the point of flexibility, it is certainly clear that this ensures the availability of funds at same day values in any currency whenever they may be desired. On the point of the U.S. connection, finally, the three investment banks in the "club deal"--no less than Salomon Brothers, Shearson Lehman, and Credit Suisse-First Boston--and the swing line will make Telefonica at home as an alternative U.S. option with respect to the London Euromarket.

According to Javier Monzon, "this operation is designed entirely for prepayments; very possibly, it will be Telefonica's only foreign market operation in 1985." Really, it was well worth the trouble. It can't be just a matter of circumstance that the annual Institutional Investor seminar--held this year in Geneva on 15 and 16 April on the topic of "Innovations in Worldwide Financing"--brought together a group of panelists from five multinationals, including Telefonica, represented by Javier Monzon.

#### Financial Strategy

In light of Telefonica's two major operations which we have been discussing--the Amper auction and the Europaper issue--it is worthwhile to discuss its financial strategy in greater depth. It ventured into the international market only once in 1985, and with the sole purpose of prepayment while, though without reaching a state of complete innovation in all of its domestic financial fronts, it has moved ahead, step by step, little by little. So it has in the market now its highly innovative issue of promissory notes, while it is waiting for the right moment in the very near future to launch an issue of very long-term debentures.

Javier Monzon offers this explanation for the external presence which has certainly been weighed quite carefully: "Although a treasury of 4 billion pesetas a year can go very far, given the alternative of foreign currency or pesetas, we prefer to choose pesetas, for the simple reason that in our business dealings we have limited foreign currency earnings, and consequently a not too easy coverage of the exchange risk." Therefore, the company reduced its foreign debt by a value of \$1.2 billion through two successive programs, the first a cut of something more than 500 starting in the last quarter of 1985, and the other later program, a switch to those very long terms--although nonexistent in the Spanish market--and to some highly flexible and sophisticated treasury management instruments. "Still, in the meantime the bond's short term is very well suited both to the easy calculation of the risk in foreign currencies and also to the use of the new framework recently established in the circular published by the Bank of Spain, which extends exchange coverage for financial operations up to 1 year."

#### Promissory Notes

In its latest promissory note operation, the Spanish treasury has obviously copied the auction formula from the U.S. treasury, and ENDESA [National Electric Power Enterprise, Inc] first of all, and then Telefonica later followed suit, both in their own fashion. Telefonica has turned to the promissory note--it has been using it since it was first introduced in Spain in 1983, both in the nonbank market and in the bank market--"because in Spain we have four flexible instruments for obtaining short-term funds: the credit account, the interbank policy, the foreign currency line, and the promissory note, which we have now improved."

Between the ENDESA promissory note and the Telefonica note--both the latest thing in terms of financial innovation--there are two differences. ENDESA operates with a closed list of 10 banks for its auction and with a line of credit, while Telefonica does not use a closed list or only banks, and it also omits a reserve line of credit. ENDESA in its 17 April auction set an average rate of 12.30, while the next day Telefonica's rate--for an entirely comparable volume--was only 11.75. In the opinion of ACTUALIDAD ECONOMICA, the price difference is excessive in this case, because the short-term risk of both companies does not merit more than a quarter of a percentage point. It seems that the difference lies rather in their comparative move into the market.

#### Debentures

Both the treasury on one hand, and Telefonica and ENDESA on the other are, as we know quite well already, about to begin an issue of very long-term debentures, though naturally it is the treasury which holds the key to the date for these issues and even more for their prior administrative authorization--therefore, controlling who will presumably carry off the advantage of this operation.

Telefonica specifically wants to issue its debentures with an average life of 15 years--its most typical investment recovery period--and to base them on the preferential rate of the seven major banks. "The long-term LIBOR," explains Monzon, "is still not very stable, the IPC [Consumer Price Index] is administratively impractical today, government debt in the end is dependent on third parties, and bank deposits are not as meaningful as they are in some other countries." At least, that's the way it appears to Telefonica.

7679

CSO: 5500/2694

SPAIN

# TELEFONICA TO PARTICIPATE IN CGE, ITT GROUP

Madrid DIARIO 16 in Spanish 3 Jul 86 p 19

[Article by Tania Juanes: "Telefonica Will Have \$300 Million Share in European Holding Group Formed After CGE-ITT Agreement"; first paragraph is DIARIO 16 introduction]

[Text] Madrid--The French company CGE [Compagnie Generale D-Electricite] and the U.S. multinational corporation ITT agreed yesterday to form a corporation that will control telecommunications in Europe. It will be the second largest group in the world. The agreement implies an advance in the European industry but is detrimental to the powerful ITT despite its participation in the holding company. Telefonica will have a \$300 million share in the new holding company whose total operations will reach more than \$2.6 billion.

Telefonica will participate in the European holding company that will acquire ITT's telecommunications shares in Europe. This revolutionizes the makeup of this sector. The French company CGE will have a leading role in that new corporation but ITT will also participate.

Telefonica will have a \$300 million investment in the new holding company. According to sources at Telefonica, it will be open to including other Spanish corporations and investors.

Telefonica's decision was announced at the same time that the Americans and French announced their important agreement in France and the United States involving more than \$2.6 billion.

In Paris yesterday, the U.S. multinational corporation ITT and the French company CGE jointly announced the agreement to regroup their activities in the field of telecommunications through the creation of a European corporation. This agreement will have to be submitted to the government which will make a decision at the end of July.

## Top Group

Negotiations between ITT and CGE have accelerated in recent weeks, according to the economic press in Europe and the United States, and have led to the creation of a holding company under French management. About 70 percent of the

shares will remain in the hands of a group of European enterprises led by CGE and the remaining 30 percent will be held by ITT. The Spanish enterprises that have revealed the intention to participate include the Societe General de Belgique and Telefonica.

The agreement entails the creation of a major holding company that groups some 423 enterprises including the French Alcatel-Thomson, controlled now by CGE. It will become not only the largest telecommunications group in Europe, but the second largest internationally with annual invoices of some \$9.6 billion.

The formation of this holding company is very important in the industrial strategy of the telecommunications sector since it means the advance of the European enterprises and the decline of the powerful U.S. ITT despite its participation.

Some 82 percent of the production of the new holding company will be in Europe, 13 percent in the United States, and 5 percent in the rest of the world. It will control 35,000 patents and will have a payroll of 150,000 workers.

According to the communique made public by CGE and ITT, the exchange systems already begun by both groups--that is, the S12 system of the Americans and the E10 system of the French--will be maintained and developed.

#### Spain Affected

The agreement between the two giants, which Telefonica will participate in, will have major repercussions on Spain. This is demonstrated by the Spanish company's interest in participating in it. ITT is not only Telefonica's main exchange supplier but also has two branches in Spain that have gone through major industrial and labor problems in recent years: Standard and Marconi.

Negotiations concerning Telefonica's participation in this new holding company that changes the industrial map of telecommunications have been carried out by the president of the company, Luis Solana.

7717

CSO: 5500/2707

SWEDEN

TELECOMMUNICATIONS AGENCY LOWERS PRICES AS MONOPOLY WEAKENS

Stockholm SVENSKA DAGBLADET in Swedish 20 May Sect III p 2

[Article by Jerry Simonsson: "Weakened Monopoly Lowered Prices"]

[Text] Televerket has been forced to greatly reduce the price of several of its products since its monopoly weakened last November. Some product prices have been reduced by as much as 40 percent. According to Televerket, technological developments are primarily the reason for its price reductions.

"It is clear that the new competitive situation has also forced down prices," said Morgan Svensson with Televerket. "But the primary reason is that technological developments have lowered the price of electronic equipment and materiel."

It is true that rapid technological developments in the area of telecommunications have greatly lowered prices in the last few years. The price of advanced telephone exchanges has dropped 50 percent in 5 years.

Big Reductions

However, technological developments have not been rapid enough to initiate price cuts of up to 40 percent, which Televerket is now doing. The price of big sellers like Diamark and Diaset is now being reduced by 400 and 150 kronor respectively. The price of a more advanced business telephone is being cut by 5,000 kronor.

According to Televerket, this is all part of a sales campaign to reduce inventory and make more room for new and more advanced products, which undoubtedly will be priced on a level with today's lower prices since new developments constantly lead to cheaper components.

Although Televerket's new competitive situation has not yet resulted in lower prices on all of its products, it will mean less expensive consumer products in the future. Televerket is being forced to review its prices and, to some extent, its network of suppliers. Relatively expensive products can be purchased from



Teli today, while other less expensive products can be imported from Hongkong and Spain.

Another important change is that Televerket has had to tighten its pricing policy. The company now has to account for all of its competitive product prices.

Its competitors, however, feel the Televerket still engages in price dumping, and the National Price and Cartel Office (SPK), which is taking a look at Televerket's pricing practices, feels that its earlier prices were mostly established at random. This is also illustrated by the fact that certain product prices went up several hundred percent when calculated on a cost basis.

#### Fighting Competitors

Televerket's entry into the competitive market has also resulted in several wrestling matches with competitors and authorities. One of Televerket's worst competitors is CPO Telecom AB, which has sued Televerket and has been countersued by the agency innumerable times. Televerket last sued CPO for deception and swindling.

"We have now been informed by police authorities that they consider the matter without cause, which is very nice," said CPO deputy director Mikael Hemberg.

Since last November, when Televerket let go of its monopoly on telephones, some 35 sets have been approved by Televerket's own authorization board. The industry has been sharply critical of Televerket's authority in this area, feeling that it limits competition. The Commissioner for Freedom of Commerce (NO) has also reacted to this and the government has now appointed a committee to look into the matter.

Despite its recent price adjustments, Televerket feels that its prices in general have not declined since last November, but that they have not risen either. To some extent, this price stability may be due to a residual monopoly on certain products. But since the monopoly is coming to an end, this possibility will also disappear, resulting in lower prices and a better reflection of what the market is willing to pay.

Mikael Hemberg reports that private companies, overshadowed by the market leader Televerket, have not been tempted to raise their prices; instead, they have been able to lower certain product prices by up to 35 percent, largely thanks to the declining dollar and less expensive technology.

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CSO: 5500/2689



TURKEY

TRT PLANS MULTICHANNEL TV BROADCASTS BY 1987

Istanbul MILLIYET in Turkish 5 May 86 pp 1,9

[Text] Work on introducing "multiple channels" on television has intensified. As outlined by Prime Minister Turgut Ozal in his statement to the Motherland Party's small congress, while the work is ultimately aimed at broadcasting over six channels, in the first stage, four channels will be on the air by the middle of 1987.

TRT [Turkish Radio and TV Administration] Director General Toskay said that negotiations are continuing for a satellite, which is needed for multichannel TV.

The most critical aspect of the "multichannel TV" issue is the "bargaining over a satellite." The developments on that issue are as follows:

--In talks on leasing six channels from satellite systems, the U.S. satellite which was recently rescued by the space shuttle and relaunched after being repaired is being considered. Talks are continuing with the insurance company which financed the rescue and repair of the said satellite and which presently has ownership rights over the satellite. If an accord is reached, channels will be leased from this satellite.

--Another alternative is building a new satellite. Officials state that the cost of a new satellite may range broadly from \$35 million to \$300 million and that this cost includes the manufacturing and the launching of the satellite into orbit.

--When six-channel--initially four-channel--TV broadcasts begin, the first two channels will be used for "normal TV programs," which will be seen everywhere in Turkey via satellite. The second channel will be different from the first channels in the sense that it will have a higher concentration of educational and entertainment programs.

--The third channel is expected to broadcast primarily entertainment programs, such as movies and musical shows.

--The fourth, fifth and sixth channels will be dedicated to education; their programs will be divided up by educational level and will contain a high concentration of foreign productions. For example, the fourth channel will

broadcast elementary school education programs , the fifth channel will feature middle school education programs and the sixth channel will air higher education programs. It is stated that the elementary and middle school programs will emphasize entertaining education for students.

--Programs on the fifth channel will emphasize foreign languages and laboratory and applied vocational courses.

--The sixth channel will broadcast university-level educational programs which will be dominated by medical education. It is stated that in this channel Western-produced programs emphasizing applications, such as surgeries, will be used.

--The educational channels will broadcast in stereo. This will be done in order to facilitate the listening of application-oriented programs in foreign languages for those who wish to do so.

--Another project planned for the educational channels is the live broadcast of courses. However, this is only at the proposal stage.

It is stated that the educational programs will have to utilize primarily Western productions until domestic productions attain a certain level. Officials insist that when these channels begin operating, Turkey "will have one of the most extensive TV education systems in the world." It is said that the TV, video-recorder and computer systems being installed in 3,000 high and middle schools are part of this effort.

Meanwhile, until six-channel broadcasts begin, it is contemplated to use the first and second channels for packaged educational programs after the end of regular programming at midnight.

9588

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TURKEY

BRIEFS

MEDIUM WAVE TRANSMITTER--A 600-kilowatt medium wave radio transmitter has been commissioned near Denizli. It will serve 5 million people and will transmit on 558 khz, 537 meters, carrying the Turkish Radio and Television's first program. [Summary] [Ankara Domestic Service in Turkish 1600 GMT 18 Jul 86 TA] /9738

CSO: 5500/2711

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